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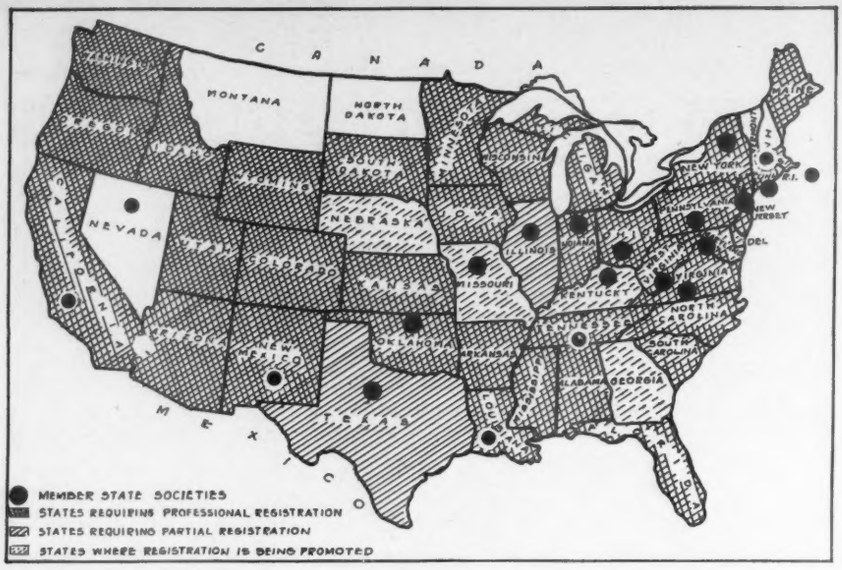

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THE AMERICAN ENGINEER

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THE COVER

The Empire State Building's lighted mooring mast dominates the night scene in mid-town Manhattan. Convention headquarters at the Commodore Hotel, adjacent to The Grand Central Terminal, is in the very heart of this jewelled mecca. Engineering Caravans from twenty states will converge here.

The American Engineer assumes no responsibility for statements or opinions expressed by contributors. Their names identify the source of the same.

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CONVENTION HEADQUARTERS

Official Headquarters of the 3d Annual Convention of the National Society of Professional Engineers, to be held in New York City, October 8th and 9th, will be the Commodore Hotel, adjacent to the Grand Central Terminal

Spacious lobby of the Commodore showing the tea room and palm court

Exterior view of the Commodore

GENERAL CONVENTION CHAIRMAN

FRED K. ZURMUHLEN, *Vice-President*,
New York State Society

MAKE RESERVATIONS EARLY

The convention committee recommends reserving rooms well in advance, notifying the Hotel Commodore that you are attending the convention of the National Society of Professional Engineers.

The Commodore's main ball room where 800 Engineers gathered recently for the New York State Convention

CONVENTION FOREWORD

Accomplishments of National Society of Professional Engineers During the Past Year

As the 1937 Convention approaches it is perhaps proper to offer a commentary on the activities of the National Society of Professional Engineers during the past year. The same must of necessity be condensed and devoid of detail.

Since January of the present year six additional states have organized professional engineering societies and have affiliated themselves with the national body. In six other states committees are engaged in organizing new state professional units and it is hoped that by the end of the year 1937 N. S. P. E. will be a confederation comprising more than half the states of the union. The commonwealths wherein State Societies have recently been formed are Indiana, Missouri, Massachusetts, Rhode Island, California and Nevada.

One of the most important problems that has confronted the Engineer in many years is that resulting from the rapid growth of the C. I. O. and other vertical types of employee unions. Stimulated by the Wagner Act unionization of employees has become one of the nation's foremost activities. The professional man generally, including the Engineer, finds himself in a rather compromising position. If he identifies himself with unionization of the type that is at the moment in vogue he not only loses his identity as a professional man but submits himself completely to regulations, income and restrictions not of his own choosing. The gravity of the situation lies in the fact that he is impotent under the present law to prevent coercion on the part of those who would place him under their domination.

The National Society has conferred with labor, with the Labor Relations Board and other professional groups. Only in affiliation with the latter in a concerted endeavor to amend existing laws does there appear to be any hope for maintaining the integrity and the identity of the profession. It is indeed fortunate that the engineering profession has finally become sufficiently conscious, socially and politically, to have made possible N. S. P. E. It is the only national engineering body that can claim a seat at a table around which are gathered the American Bar Association, the American Medical Association, the American Institute of Certified Public Accountants, the American Dental Association and other representatives of legally recognized professions. In every state and in every county as well throughout the nation it is hoped that conferences between strictly professional organizations will result in developing a public opinion that will safeguard professions from the domination of non-professional interests.

In a score of states legislation has been proposed, enacted, opposed or defeated by the state professional bodies. In almost every instance the National Society has participated to such extent as was deemed within the bounds of propriety by the State Society. N. S. P. E. does not attempt to participate in state affairs except upon the request of the local professional organization.

Since its formation the National Society has urged upon the President, Congress and the public generally the necessity for establishing a cabinet office of Public Works to be presided over by a Secretary who shall be a Professional Engineer. Measures have been introduced at the last two sessions of the national legislature. At the beginning of the present year there was justifiable hope that Congress would, on the recommendation of the President, act on this subject. The debate over other legislation resulted in sidetracking a much needed governmental reorganization program. Throughout the entire legislative session N. S. P. E. and its state units were pressing for action. There is reason to believe that the matter will go before Congress early next year.

In cooperation with other professional groups objections to undesirable sections of the Wages and Salary Bill were registered by N. S. P. E. and it is probable that the failure of this measure to secure Congressional approval was to some extent attributable to the criticisms made by these groups.

Problems incidental to recognition and enforcement of license laws have arisen in every state. Exchanges on methods employed by the several state agencies have been accomplished with benefit to all concerned through the medium of the national unit. The correspondence requesting and furnishing interstate information has developed into tremendous proportions.

Exchanges and cooperative relations between the United States, and France, Canada and the Irish Free State, where professional engineering groups have been organized, indicate a noteworthy step in the direction of a real professional fraternalism. The President of the National Society received a most cordial invitation to attend an Engineering Congress to be held in Paris during September of this year. The problems of foreign Engineers are much like those of American practitioners and the awakening of a professional consciousness is apparent in other lands as well as our own.

The organization program of N. S. P. E. has been of a magnitude out of proportion to its income. This has been made possible because of the continued sacrifices of the officers, directors and committeemen of the Society. The President and Secretary have between them traveled more than 15,000 miles during the past year. Other officers and directors have covered sufficient distances to bring the total to 20,000 miles,—all in the interest of the professional movement.

The exchanges of invitations and visits between state officers is an indication of one accomplishment that of itself alone would justify the National Society of Professional Engineers, namely, the formation of friendships and acquaintances between men who would have otherwise never met. In some states the profession is already one large family. That this may soon be true of the profession throughout the nation is the aspiration and hope of N. S. P. E.

ARTHUR V. SHERIDAN
President, National Society of Professional Engineers

"Accomplishments and Objectives"

From Hand Book Issued by New York State Society

In sending you this pamphlet on "Accomplishments and Objectives," we hope that it will bring to you a new realization of what Engineers can achieve, through effective organization, for the advancement of their Profession in public service and in public recognition.

For handling state-wide and local problems of legislation and public relations, the State Society, with its County Chapters, has been demonstrated and universally acknowledged to be the most effective form of Professional organization.

For mutual inspiration, increased effectiveness, and national accomplishment, the State Societies of Professional Engineers are welded together in the National Society of Professional Engineers. The three units, National, State, and County, are integrated. When you join one, you join all three.

Before it can expect recognition, a Profession must be recognizable. Registration establishes Engineering as a legally defined and recognizable Profession. The only agency that can admit a man into the Engineering Profession is the legally authorized State Board. Membership in an Engineering Society does not make a man an Engineer. He should be an Engineer before he is admitted to membership. The National Society of Professional Engineers is the only organization in which all of the members are Engineers.

In addition to being defined, a Profession must be integrated. Technical societies are organized on the basis of *dividing* the Profession into branches and specialties. The National and State Societies of Professional Engineers are organized on the principle of *uniting* all Engineers as members of *one* Profession.

The *technical* problems of Civil, Mechanical, Electrical, Chemical and Mining Engineers are divergent, but the *Professional* problems are alike. The National Society of Professional Engineers, with its State and County units, supplies the need of a nationwide *Professional* organization devoted to the common interests and aspirations of *all* Engineers. It is organized to do for the Engineering Profession what the Medical Association and the Bar Association have done for their respective Professions in increasing prestige, legal protection, public confidence, and professional recognition

Every man is a debtor to his Profession. The National Society of Professional Engineers, with its State Societies, is consecrated to fostering the ideals and the traditions of the Enginering Profession, to stimulating public service within the Profession, to guarding high standards of professional honor, and to strengthening and conserving public confidence and esteem. Through membership and active participation in this organization, the individual Engineer renders his contribution toward making Engineering a greater, nobler and more satisfying Profession than he found it.

Will you join in this movement by becoming a member of the Society and thus contribute to the success of its efforts in your behalf?

ALFRED E. ROCHE, President
New York State Society of Professional Engineers.
ARTHUR V. SHERIDAN, President
National Society of Professional Engrs.

The New York State Society of Professional Engineers was organized in 1926. The earnestness of the founders was attested by their personal contributions of thousands of dollars, in addition to their unsparing energies and devoted services, to carry the organization forward. From this beginning there has grown an established and successful State Society with 2800 enrolled members in 28 active Chapters embracing 44 Counties containing 95 per cent of the entire population of the State.

In 1934, the New York State Society took the initiative in bringing together the four State Societies then established to form the National Society of Professional Engineers. The National Society has extended the organization of State Societies and now (1937) has 20 Member State Societies extending from coast to coast and from the Great Lakes to the Mexican border. With the new impetus given to the Registration movement by the National Society, Engineers' Registration Laws have now (1937) been extended to 38 states.

Membership in the National and State Societies is secured through enrolling in the County Chapters. The total annual dues vary from $10 to $12, depending upon the amount fixed by the County Chapters. This covers combined membership in the National, State and County organizations, and also covers the subscription to our Professional publication, the AMERICAN ENGINEER. *A list of County Chapter Presidents and Secretaries is included in this pamphlet. Information and application forms will be furnished on request.*

Visit the Chapter meetings and join the organization of your Profession.

EDITORIAL . . .

THE ENGINEER IN TRANSITION

The Engineer has generally been considered a technically minded and mannered being—devoting his life to design, construction, operation; leaving to others the social, political, and economic problems. Actually, he has been a keen student of these basic issues of life, and is probably better fitted to understand them than any other single business or profession.

Unfortunately in the past, he has organized himself into groups functioning solely along lines of his technical work. Consequently the public at large has paid little heed to him in the group, and his sound thinking has had little effect on national issues.

But now he is being subjected to two influences which will govern his future place in Society:

FIRST—his own recently found urge to organize into a professional group, including all branches of his profession, to protect his "non-technical" life activities.

NEXT—the force of economics, acting through labor in its unionization drive to increase earning power, and taking the form of vertical unions, attempting to encompass professional engineering in its "trade" ranks.

Our own organization, the National Society of Professional Engineers, has come into existence and has grown because of the first reason. Because of the second reason, this Society will have an increased impetus for growth, and more especially for wider and broader opportunities to benefit its members. It must not temporize with its challenges—it must meet them immediately with fighting vigor—

HOW???

FIRST, by the *ENTHUSIASM* of group action—the gathering of individuals together to discuss their mutual problems. (The New York Convention of N.S.P.E. on October 8 and 9, will supply this.)

SECOND, A battle *PLAN* conceived by the officers and the directorate of the Society, propounded to the membership and adhered to vigorously—the plan including all possible steps to improve the engineers' status in industry, government and business, with especial emphasis on his purchasing power income.

THIRD, The strengthening of our ORGANIZATION—by tying Chapters closer to State Societies, and State Societies closer to the National Society. (This warrants special active study)—By improving the opportunities for the officers to function by increasing the budget of the National Society. By giving it more funds, derived from increased membership and increased individual member dues. The budget is carefully and honestly administered, but we expect too much from our elected officers. Investigate for yourselves what Steinman, Sheridan, Harris, Ford, Roche, Conlon, and many others have done at their own expense—it will amaze you!

Let us not convene in October,—and just eat, talk, listen, greet,—but let us lay the foundation for a program of activity in our Society which will make it the strongest engineering organization in the world—for the public welfare—for the social welfare of ALL IN THE ENGINEERING PROFESSION.

—R. H. C.

WHO'S WHO IN THE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

AN OUTLINE SKETCH OF TEXAS' PRESIDENT

Name: Col. William B. Tuttle.

Present Title: Chairman of the Board of Directors, San Antonio Public Service Company.

Business Address: 201 N. St. Mary's Street, San Antonio, Texas.

Residence: Terrell Road and North New Braunfels Ave., San Antonio, Texas.

Profession or Occupation: Engineering Executive.

Place and date of birth: Austinburg, Ohio, July 3, 1874.

When and where educated: University of Virginia. Student Instructor 1½ years.

Career:

3/1/1896-7/16/1897	Asst. to Supt. Consolidated Gas Co. of New Jersey.
7/16/1897-2/16/1898	Asst. to Engr. American Light & Trac. Co., New York.
2/16/1898-6/16/1903	Supt. Consolidated Gas Co. of New Jersey.
6/16/1902-7/23/1906	Gen'l Mgr. Consolidated Gas Co. of New Jersey.
7/23/1906-6/30/1916	Vice-Pres. and Gen'l Mgr., San Antonio Traction Co. and San Antonio Gas & Electric Co., San Antonio, Texas.
7/1/1916-4/9/1918	Vice-President and General Manager, San Antonio Public Service Co.
4/9/1918-12/26/1922	Vice-President San Antonio Public Service Co.
12/26/1922-7/1/1935	President San Antonio Public Service Co.
7/1/1935 on	Chairman of the Board of Directors, San Antonio Public Service Co.

Special Achievements:

2/11/16-9/19/16	Associate Member Naval Consulting Board.
4/22/18-7/16/18	Colonel, Second Texas Cavalry.
7/16/18-3/11/19	Major, Construction Division, Q. M. C. (Regular Army).
3/2/21 -4/30/23	Major, Engineer Officers' Reserve Corps.
4/30/23-6/11/26	Lt. Col. Engineer Officers' Reserve Corps.
6/11/26 on	Colonel, Engineer Officers' Reserve Corps.
1922-3-4	Member of Governor's (Texas) Advisory Council of Engineers on Water Conservation and Flood Prevention.
1936 on	Member of Industrial Committee, Texas Planning Board.
1937 on	Member of Governor's (Texas) Safety Committee, Engineering Group.

Officer in or director of:

San Antonio Public Service Co.	Chairman of Board of Directors.
South Texas Ice Co.	Chairman of Board of Directors.
Central Securities Co.	President.
South Texas National Bank	Chairman of Board of Directors.
Southwestern Engineering Co.	Vice-President and Director.
Espejo Land & Irrigation Co.	Secretary-Treasurer-Director.
Texas Transportation Co.	President.

Professional Associations:

American Society Mechanical Engineers.
American Institute of Electric Engineers.
American Gas Association.
Texas Society of Professional Engineers.
Edison Electric Institute.
American Transit Association.
Southern Gas Association.
American Society of Military Engineers.
First Vice-President—Reserve Officers Ass'n of the United States.
Commanding Officer—315th Engineer Reserve Regiment.

NATIONAL SOCIETY NEWS

Sheridan Slated for Re-election as President of Engineers' Society at Annual Convention

From the Bronx, N. Y., Home News, September 20, 1937

Arthur V. Sheridan, chief engineer of the Bronx, has been renominated as president of the National Society of Professional Engineers, it was announced today.

The organization will elect officers at the third annual convention in the Hotel Commodore on Oct. 8th and 9th. Invited speakers include Gov. Lehman, Mayor LaGuardia and the presidents of the American Bar, Medical, Architectural and Accounting Associations.

Sheridan said because of the pressure of business he has had to decline an invitation to participate in the World Engineering Congress being held in conjunction with the International Exposition in Paris. He received the invitation from the French Engineering Society.

Besides his work in the Bronx, Sheridan, as president of the engineering society, must make speaking tours into various parts of the country.

Exhibit is Planned

An exhibit of models, rendered drawings and products employed in designing and constructing some of the great public works in the East will be on display in the West Ballroom of the Commodore during the convention here.

From 1,000 to 1,500 persons are expected at the luncheon in the Grand Ballroom on Saturday, Oct. 9th.

Matters to be considered by the convention are set forth as follows:

"Amending the Wagner Act and other laws which in their present form are inimical to both public and professional welfare in that they make the professional man subject to coercion by non-professional groups, thus endangering the general welfare of the nation.

"Consideration of the desirability for having an engineer, preferably one also possessed of a legal training, as a member of judicial agencies, including the U. S. Supreme Court. There is no Constitutional provision which requires a member of this Court to be a lawyer.

Construction Responsibility

"Awakening of public opinion to the necessity for proper engineering supervision and of the responsibility for the construction of all projects wherein life, health, and property are at stake. The collapse of buildings, which has on a number of occasions taken a considerable human toll, is a striking evidence of the need for arousing the public conscience in this direction.

"Creation of a cabinet post to be known as a Secretariat of Public Works and presided over by a professional engineer. The society and its affiliated State organizations have pressed for this governmental reorganization for several years. Pres. Roosevelt has indicated his belief that a coordination of all planning and construction endeavors should be brought about through the creation of a cabinet post of the nature sponsored by the society."

It was announced that the convention will not discuss technical or scientific problems. but "will confine itself to deliberations that are of human interest and suggestive of the engineer's responsibility to the nation, and to his profession."

ANNUAL REPORT

N. Y. State Board of Examiners for Professional Engineers

During the year ended June 30, 1937 the State Board of Examiners of Professional Engineers and Land Surveyors held 15 meetings extending over a period of 27 days and considered 7173 applications for licenses, of which 1510 were rejected, 1795 held for written examination, 769 held for further consideration and 3099 recommended for licenses. This is an increase of 62% over the number of applications considered during the fiscal year ended June 30, 1936 and about four times the number considered during the fiscal year ended June 30, 1935. In referring to the total number of applications considered it should be understook that the figure does not represent new applications only which have not heretofore been reviewed by the Board; it includes certain duplications where the same applications may have been reconsidered on one or more occasions. In effect the total figuress given as to applications considered indicate simply the total number of applications reviewed by the Board during the year and as the result of such review action was taken which may or may not have been the final action.

On June 30, 1937 the following shows the number of licensed professional engineers and land surveyors who were registered on that date and thus legally entitled to practice—

Professional Engineers only	8220
Land Surveyors only	753
Professional Engineers and Land Surveyors—those holding both licenses	2936
Total	11909

It should be kept in mind that the above figures do not include persons who at one time were granted a license and have since died or persons who have failed to comply with the law as to annual registration. Since the law was originally enacted about 18000 persons have received licenses to practice either professional engineering or land surveying or both in this State.

During the fiscal year covered by this report only one written examination was held. The examination originally scheduled for June, 1937 was not held until July. At the February, 1937 examination 603 candidates appeared and of these 477 were recommended for licenses; 41 were rejected, and 85 were held for re-examination in one subject. It will be noted that the percentage of those passing this examination was 79 per cent as compared with 80 per cent and 76 per cent during the last two previous years.

The net amount received from fees during the fiscal year ended June 30, 1937 was $105,052.00; the expenditures were $23,735.53, leaving a surplus of $81,316.47. The net amount received from fees during the previous fiscal year was $88,339.00 and the surplus was $62,814.32.

During the year the Board considered charges filed seeking the revocation of a license heretofore issued to a person to practice land surveying. In the opinion of the Board the charges were not sustained and the license was not revoked.

One amendment was made to the Licensing Law during the 1937 session of the Legislature. This amendment provided that a person not a resident of and having no established place of business in the State, is not exempted from offering to practice in this State as a professional engineer or land surveyor unless such person is legally qualified for such practice in his own State or Country. It further provided that in granting exemption from the provisions of the Act for only such reasonable time as the Board requires in which to consider and grant or deny an application for a license of a person not a resident of the State, or one whose arrival is recent that such person not only must have filed his application but also must be legally qualified for practice in the State or Country in which he resides or has his place of business or that of his previous residence or place of business.

The amendment also exempted from the provisions of the Licensing Law persons engaged in the operation or maintenance of steam, power or refrigeration plants.

There was no change in the personnel of the Board during the year which remained as follows:

Erich Hausmann, Chairman
Virgil M. Palmer, Vice Chairman
Roy G. Finch, Secretary
David B. Steinman
Norman R. Gibson

Request

The National Society of Professional Engineers recently requested the United States Civil Service Commission to give favorable consideration to the following:

1. That an applicant applying to the Commission for examination as an Engineer for the grade of associate or above from any one of the thirty-eight States and three United States possessions now having Engineers' License Laws be required to submit evidence to the Commission that he is legally qualified to practice professional engineering in his own State

2. That the United States Civil Service Commission give the same consideration to a licensed professional engineer as they do to a licensed doctor or to a member of the Bar Association, in that, if a State license to practice as a doctor and membership in the Bar Association are accepted as evidence of qualifications for these professions, that a license as a professional engineer also be accepted as evidence of qualification, and further that if members of both of these professions are not required to take an examination that the engineering profession also be accorded this privilege on the same basis.

The Engineer and His Societies

By G. J. NICASTRO (Director, New York County Chapter, N. Y. State Society of Professional Engineers)

The engineering profession is one of the youngest although the practice of engineering is probably the oldest of all professions. The medical and legal professions are no doubt the best organized and most exclusive professions in existence today. On the other hand, the engineering profession is the most unorganized profession of all.

The engineering societies are divided mainly into two groups of national societies, namely, the technical and the professional. There are at least one hundred different technical societies in the United States, which serve various divisions of engineering; however, there is but one professional society, which is concerned with all the branches of engineering.

Each technical society is concerned with its own specialized branch of engineering. In its particular field, each technical society is an important unit and performs useful work. Its activities are restricted, as much as possible, to its own division of engineering. Obviously, it will only be a matter of time before this type of organization will yield to the demand for broader engineering interests.

In this connection, it is interesting to note the trend of our leading engineering schools. Many of them have realized the disadvantage of offering specialized courses leading to degrees in one particular field of engineering. This type course no longer has the appeal it once had. Conditions today demand that an engineer have a broad educational background.

The engineers should be the leaders in industry and, as leaders, should possess broad engineering viewpoints. The chief engineer today is not a specialist. His problems are mechanical, electrical, chemical, etc. In order for him to keep informed of the latest developments, he would have to participate in the activities of the various societies. Very often, these activities are held at the same time, so that it is impossible to participate and, quite often, the activities overlap and even duplicate those of other societies, so that the engineer soon becomes disinterested. Therefore, it is difficult for him to become associated with several technical societies in order to derive the benefit he desires from each.

Since the engineer coordinates all branches of science in his work, so he would like to see one integral technical engineering society. This society should be composed of all the present technical societies. Each component part of the society should carry on the work of its particular division in specialized fields of engineering.

In this manner, the engineer would be associated with one single society which would be able to serve him more readily and more efficiently. His technical interests would be centralized and at the same time, he would have the advantages of specialization in all branches of engineering.

In addition to the difficulty the engineer has with his technical associations, he has to compete quite often with untrained and unqualified men. This condition is undesirable and is perhaps the direct result of poor organization in the engineering profession. However, it may be overcome by proper legislation and strict enforcement of the license laws.

The public must be protected and should have qualified engineers do engineering work, The professional society is concerned with the practice of engineering only by those who are trained and qualified and have met certain minimum requirements which apply to every engineer. The professional society devotes itself to the economic and welfare problems of the profession in its relations to the public and to the individual engineer.

The interests of all engineers are on a common basis in this society. It is the largest organization of engineers united for the purpose of advancing the interests of the profession as a whole. Every qualified engineer has invested much time and money in the training and practice for his professional career. The professional society is organized to protect and increase the value of this investment.

At the present time, it might be well to point out that the engineering profession should not be allowed to become associated with unions. The unions, whether vertical or horizontal, endeavor to ameliorate working conditions for their members. The purpose of the professions, whether engineering or otherwise, is the safe guarding of all human beings and the improvement of living conditions. Therefore, it would be unwise for the professional men to take sides as their professional judgment demands impartial exercise of their training and experience.

Eventually the day will come when the engineer will demand one professional association similar to the American Medical Association and the American Bar Association. Perhaps it will be the "American Engineering Association." This association should be composed of all the present technical and professional societies. All of the engineer's fraternal interests would be centralized with this arrangement. He would be served more efficiently and would perform his duties with greater general ability.

It has been said that the greatest difficulty with mankind is the incapacity of mind to view matters from all angles. Perhaps this is another reason for poor organization in the engineering profession. Until recently, the engineer has interested himself only in the technical side of his profession. However, he has come to realize that in order to serve the public more fully, he should interest himself in the social side of his profession also he is thereby developing himself into a real leader by viewing his profession from all angles.

The advantages of consolidation may be illustrated by the Engineering Societies' Library which is composed of libraries of several technical societies. While each technical society lost its individual library, the result was that the combined library gained in size, importance and ability to serve. So, with the consolidation, the combined library became the finest engineering library in the United States, if not in the world. The use of such a library is now of great value to the members of the individual societies.

The engineering societies might also be compared with the various departments of our present day corporations. Each department is a small corporation in itself and each doing its own particular work. However, unless the work of each department is coordinated to form a part of the work of the corporation, the business will not be carried on efficiently. Each department, like the societies, should work together for their mutual benefit.

As an example, a corporation had a vice-president in charge of each of its major departments. Each vice-president varied in length and quality of service. Soon the time came when a new president had to be appointed from the vice-presidents. The man chosen did not have

(Continued on page 14)

1937 Legislation Affecting Engineers in Pennsylvania

An Address by S. EDW. HANNESTAD, of the Pennsylvania Legislative Reference Bureau, Before the State Convention of Professional Engineers at Hershey, Pennsylvania

It is with some degree of trepidation that I venture here to expound law to engineers, for it has been my experience that the laws with which engineers are most concerned are so loaded with technical engineering terms that the average lawyer has to call in an engineer to tell him what the law is about. However, if you will accept me as a mere reciter of a catalog of the more outstanding features of the 1937 enactments, I shall not attempt to explain to you the practical effect of extending the boiler inspection laws to unfired pressure vessels, or how to go about establishing or fixing triangulation and traverse stations under the authorized system of rectangular coordinates.

Nor may I even claim credit for the catalog that I am about to recite, as all but the last few pages is copied verbatim from a review of 1937 legislation prepared by my chief, Mr. John H. Fertig, Director of the Pennsylvania Legislative Reference Bureau, for whom I am substituting on this program, and who bids me convey to you his regrets over his inability to be with you in person.

The legislation of 1937 is both voluminous and important, probably more important than one can appreciate so soon after its enactment. Only the test of time and the success or failure of experiments can determine the ultimate effect on our institutions and more clearly define the course along which we are headed. The legislation reflects the great economic changes through which the American people are passing; it evidences in unmistakable terms the rising power of labor in seeking shorter working hours, better working conditions, higher wages, and the right, as a matter of law, to bargain with the employer; it broadens the field of regulation particularly as affecting industrial and labor relations and the public utilities; it confirms the Federal policy that the effects of the depression may be alleviated by great public expenditures, and to this end provides for quasi-public agencies empowered to construct public works which the State and local governments could not finance under present constitutional limitations; it establishes a vast program of social security to care for the aged, dependent children, the unemployed, and the unemployables not needing institutional care, and to provide pensions for the blind; it abolishes 476 poor districts and creates 68 institution districts which will take over the functions of the poor districts in caring for and maintaining those indigents who need institutional care; it sets up the initial machinery for larger units for the administration of the public schools; it provides for extensive public housing programs; it provides for flood control, for the purification of our streams, for soil conservation, and for an investigation of the oil industry; it evidences the tendencies toward centralization in government, and materially expands the administrative forces of government. When the system of unemployment compensation, established in December, 1936, is added to this legislation, we find a program so vast in extent that comparison with the past is impossible. However, if these efforts can be coordinated into a unified program, can be soundly financed and have the effect of pulling us finally out of the depression and of cushioning the shock of future depressions, at least those whose lot has been bettered can have no complaint.

But before all of this program can be placed into operation, many constitutional questions will arise. Some of these enactments lie in unexplored constitutional fields, while still others are seemingly contrary to established lines of decisional law. The judgments of our appellate courts will ultimately settle these many questions and mark the sign posts to guide the next generation in the development of laws under constitutional forms of government.

Cost of Social Security

One of the more important features of the social security program is its cost, which to the Commonwealth during the next two years, will be $138,650,000.[1] It is estimated that the Federal government will contribute an additional $36,000,000. The amount contributed by employers to the Unemployment Compensation System and by employers and employes to the Federal old-age benefit system during the next two years will probably be between $125,000,000 and $130,000,000. In round numbers, $300,000,000 will be poured into the social security program from this State during the next two years, which is six times the State appropriation for the support of the public schools.

State Taxation

In order to raise the revenue needed to meet this expenditure of $138,650,000, certain temporary taxes, first levied in 1935 for unemployment relief and to balance the budget, were continued. These include (a) the capital stock tax on manufacturing capital and the foreign corporation franchise tax;[2] (b) the four mills State tax on personal property and the increase of four mills on the corporate loans tax;[3] (c) the increase of the gross receipts tax on certain public utilities from 8 to 20 mills;[4] (d) the increased tax on the shares of banks[5] and on title insurance and trust companies[6] from 4 and 5 mills to 8 mills; (e) the cigarette tax of one cent on each ten cigarettes;[7] (f) the corporate net income tax at the rate of 7% (formerly 10%);[8] (g) the one additional cent per gallon on liquid fuels;[9] and (h) the 10% tax on the sale price of liquors sold at State stores.[10]

Another new tax, the revenues of which are to be devoted to school purposes, is the one on chain stores and theatres, which imposes an excise tax of $1 to $500 on each store or theatre, depending on the number in a chain. The $500 tax applies to all stores and theatres after the first 500 in a chain.[11]

One State tax was repealed—that on matured stock of building and loan associations,[12] the revenues from which are negligible.

(1) June 24, No. 57-A.
(2) Apr. 8, No. 55, P. L. 239.
(3) May 18, No. 171.
(4) Apr. 8, No. 56, P. L. 245.
(5) Apr. 8, No. 60, P. L. 254.
(6) Apr. 8, No. 59, P. L. 251.
(7) Apr. 8, No. 53, P. L. 220.
(8) Apr. 8, No. 54, P. L. 221.
(9) Apr. 8, No. 57, P. L. 248.
(10) Apr. 8, No. 58, P. L. 250.
(11) June 5, No. 344.

Amendments to the Fiscal Code[13] require bonus charges due by foreign corporations and capital stock taxes, corporate and municipal loans taxes, gross receipt taxes, and other miscellaneous taxes to be computed and paid concurrently with the filing of the tax report with the Department of Revenue. Taxes on shares of banks, title insurance and trust companies become due 60 days after settlement. All taxes and bonus will hereafter bear interest at the rate of 6% from the due date until 60 days after settlement, and thereafter 12%, except those found due as the result of an appeal where the interest is 6%.

Labor Legislation

In the field of labor legislation, about twenty enactments may be listed.

Every employer is required to make report to the Department of Labor and Industry of accidents happening to an employe in the course of his employment. Such reports must be made within 15 days of the accident in case of injury, and within 48 hours in case of death.[14]

Political subdivisions were authorized to insert stipulations in public works contracts, specifying the minimum wages which may be paid by a contractor and his subconcontractors for work performed by laborers and mechanics.[15] This act follows similar provisions which apply to the State.[16]

Contracts of all school districts are required to contain a stipulation for competent and first class workmen and mechanics, and that they shall be paid not less than the wages paid by employers of organized labor for similar work in the district.[17]

A new factory act was adopted to further protect the safety and health of workers in industrial establishments,[18] and the existing law on the subject was repealed.[19]

Various clarifying amendments were adopted to the Unemployment Compensation Law, the main purpose of which appears to be to assure that no one can escape payment of the contributions imposed by that act.[20]

A new Labor Mediation Act was adopted.[21] This contemplates first the submission of labor disputes to a commission or panel set up by the Department of Labor and Industry, and if this procedure is not successful, an arbitration is provided for before a board composed of three arbitrators.

The employment of females was restricted to 8 hours a day, 44 hours in one week, and 5½ days a week.[22] Certain persons are excepted from the act, such as domestics, agricultural labor, nurses in hospitals, females employed in orphans' and industrial homes, and executives earning more than $25 a week. A general 44 hours of labor law was also enacted.[23] This applies to males and females. The exceptions in this law differ somewhat from the one relating to females, and conflicts between these two acts will necessarily arise.

A Labor Relations Board was created, and similar provisions adopted as are found in the Federal Labor Relations Act, which are designed to advance the cause of collective bargaining.[24]

A comprehensive measure was enacted to control and regulate the issuing of injunctions in labor disputes.[25]

Employers are prohibited from threatening or intimidating employes into signing petitions.[26]

A law was adopted to regulate the number of men which must be employed by railroads in crews moving trains and engines.[27]

The recruiting and transportation of labor to replace that involved in a strike or lock-out [28] was prohibited.

Workmen's Compensation

The Workmen's Compensation Act was entirely reenacted and materially revised. The weekly minimum and maximum benefits are increased from $7.00 and $15.00 to $12.00 and $18.00, and, in a number of cases, the weekly benefits are to be continued for longer periods. The cost of administering the Workmen's Compensation Laws will hereafter be charged to employers, or, if they are insured, to their insurance carriers, in such equitable amounts as the Department of Labor and Industry shall, by rule and regulation, prescribe.[29]

The Workmen's Compensation system was extended to certain occupational diseases, principal among them being silicosis. Compensation would be payable only for total disability or death caused primarily by such a disease as distinguished from a contributory or accelerating cause.[30]

Public Works and Housing

Of particular interest to engineers, I take it, is the program dealing with public works and housing. Unfortunately, our limited time and the great number and technical character of these laws will permit only a mere reference to them. Broad powers were conferred on municipalities to enter into relations with Federal agencies for the construction and financing of public works projects, with the viewpoint of simplifying the procedure.[31] The General State Authority Act [32] was amended[33] subsequent to the time it was held constitutional by the Supreme Court.[34] Companion bills to these amendments contemplate the erection of a new Pennsylvania industrial school,[35] the use of the present industrial school for defective delinquents,[36] the erection of a new maximum security penitentiary,[37] a tuberculosis sanitarium,[38] a psychiatric Hospital,[39] new armories,[40] and various improvements to existing State institutions, and a new finance building at the State Capitol.[41] The Municipal Authorities Act was also amended, clarifying certain provisions and permitting two or more municipalities to create a joint authority.[42]

The case of Tranter v. Allegheny County,[43] which affirmed the validity of locally created authorities, has opened a wide field for the financing of public works through the issue of non-debt revenue bonds. These bonds appear to be now validly established so long as the taxing power is not pledged and no lien given upon any property owned by the municipality. Based on this decision, are the series of laws which enable municipalities singly or jointly, directly or through the creation of an authority, or by erection by private corporations, to engage in sewer and sew-

(12) Mar. 15, No. 22, P. L. 62.
(13) Feb. 2, No. 1, P. L. 3.
(14) Mar. 10, No. 19, P. L. 56.
(15) Mar. 16, No. 26, P. L. 98.
(16) Administrative Code, Sec. 522, as added June 1, 1931, P. L. 350.
(17) May 28, No. 263.
(18) May 18, No. 174.
(19) May 2, 1905, P. L. 352.
(20) May 18, No. 175.
(21) May 18, No. 177.
(22) June 4, No. 322.
(23) July 2, No. 567.
(24) June 1, No. 294.
(25) June 2, No. 308.
(26) June 1, No. 288.
(27) June 1, No. 287.
(28) June 21, No. 391.
(29) June 4, No. 323.
(30) July 2, No. 552.
(31) June 4, No. 329.
(32) June 28, 1935, P. L. 452.
(33) May 18, No. 178; June 4, No. 32.
(34) Kelly v. Earle, 325 Pa. 337.
(35) June 21, No. 376.
(36) May 25, No. 224.
(37) June 21, No. 375.
(38) July 1, No. 538.
(39) June 21, No. 377.
(40) July 1, No. 515.
(41) July 1, No. 540.
(42) May 20, No. 200.
(43) 316 Pa. 65.

age treatment construction programs and to finance these through sewer rentals.[44]

Included in the public works program, is an act creating a commission with authority to construct an all-weather highway, following the line of the proposed South Penn Railroad from Middlesex in Cumberland County to a point near Irwin in Westmoreland County, and making use of its partially constructed tunnels.[45]

The housing acts provide for the creation of limited dividend housing corporations,[46] authorize political subdivisions to aid housing projects,[47] authorize counties and cities to create slum clearance authorities,[48] and create a State Board of Housing in the Department of Health.[49]

Public Utilities

The Public Service Commission was abolished, and a Public Utilities Commission created in its stead.[50] The Public Service Company Law was also repealed, and a new regulatory law enacted. The outstanding provisions of this law[51] are the power to prescribe temporary rates which will apply until the rate proceeding before the Commission and the courts is completed; the power to establish, for other than common carriers, a system of adjustment of rates on a sliding scale basis; the power to regulate the budgets and accounting systems of public utilities; and the power to vary and reform the contracts of utilities with third persons. The burden of proof is placed on utility companies in all rate cases instituted by the Commission. Stringent regulations are applied to all security issues, and to the financial transactions of utilities with holding companies and affiliated interests. The Commission is made self-sustaining by empowering it to assess the cost of regulation against the utilities regulated. The appellate courts are limited in the reversal of orders of the Commission to cases where there is error of law or lack of evidence to support an order or a violation of constitutional rights.

The creation of non-profit cooperative corporations to furnish electric energy to persons in rural areas was authorized. While such corporations would have substantially the same powers as other public utilities engaged in such business, they are exempt from taxation except an annual charge of ten cents a member.[52]

Public service companies, whose right of way is taken for State or county highway purposes, may be required to share in the cost of removing to a new location. If the amount cannot be agreed upon, it is determined by the Public Utilities Commission, subject to appeal.[53]

All Commonwealth grants of public works, canals, rights and privileges are declared forfeited where the conditions, covenants or terms of such grants have been, or shall hereafter be breached by disuse or otherwise by the owners or holders thereof, the forfeiture to be enforced by the Attorney General.[54]

Plane Coordinates

More specifically in the field of engineering, is the legislation providing for a system of plane coordinates for designating the positions of points on the surface of the earth within this State,[55] to be established and regulated by the Department of Internal Affairs.[56] I understand that the system consists of criss-crossing the State with lines running north and south, and lines running east and west, indicated on the ground by permanent markers, to be placed, so far as possible, along highways and railroads. Eventually, it is hoped, there will be enough of these markers so that no point will be more than one-half mile distant from the nearest marker. Engineers, surveyors and their representatives are permitted to enter on private property in order to use survey stations established by or under the direction of the United States Coast and Geodetic Survey or as a part of the Pennsylvania Coordinate System, but must make good any damage to the property in doing so.[57]

Planning and Zoning

County and regional planning commissions may now be established in all counties to fill the gap between State and local planning[58]

Counties are also authorized to adopt zoning ordinances, which contemplate both the extension of urban zoning, and zoning to restrict land use in rural sections.[59]

The right to adopt and enforce zoning regulations was likewise conferred on townships of the second class, in the absence of the exercise of the power by the county.[60]

Flood Control and Soil Conservation

The Flood Control Act, adopted at the special session in 1936, was reenacted and amended,[61] by providing, among other things, in condemnation proceedings, for the setting off of benefits not only to the balance of the property from which a part is taken, but also to any other property of the same owner, further limiting private and municipal rights in the waters of flood control areas and their riperian rights, and by permitting municipalities to incur or increase indebtedness for the purpose of appropriating money to the Water and Power Resources Board to assist in carrying out the purposes of the act.

The prevention of soil erosion was given considerable attention by the 1937 legislature. The provisions of the Federal Soil Conservation and Domestic Allotment Act were assented to and accepted. The Pennsylvania Agricultural Conservation and Adjustment Committee, of seven members, mostly farmers, was created and designated as the State agency to cooperate with the Federal agencies.[62]

Provision was also made for the organization of soil conservation districts, with power to enact ordinances and regulations for the prevention and control of soil erosion. The same act sets up a State Soil Conservation Board in the Department of Agriculture.[63]

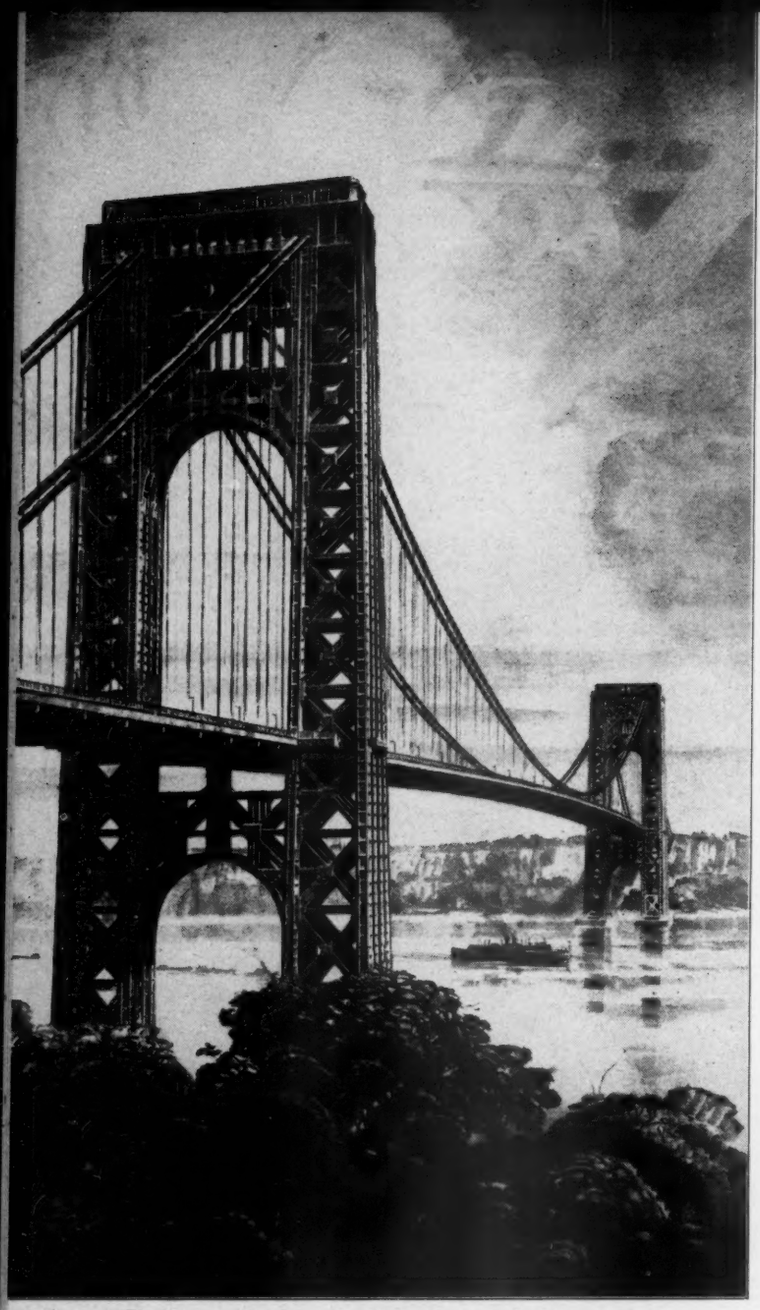
An amendment to the Administrative Code authorizes the purchase of lands for reforestation for the purpose of lessening soil erosion, the silting up of reservoirs, control of the flow of streams, etc.[64]

Conservation, Distribution and Development of Water Resources

All heretofore unappropriated flowing waters are appropriated to the Commonwealth for the benefit of all of the people, and no municipality or private interest may take or use the same except pursuant to permits granted by the Water and Power Resources Board.[65]

This board may also lease lands of the Commonwealth

(44) May 7, No. 146, P. L. 571; No. 147, P. L. 574; No. 148, P. L. 578; No. 149, P. L. 582; May 14, No. 159, P. L. 630; and May 28, No. 260.
(45) May 21, No. 211.
(46) May 18, No. 181.
(47) May 26, No. 232.
(48) May 28, No. 265.
(49) June 5, No. 359.
(50) Mar. 31, No. 43, P. L. 160.
(51) May 28, No. 286.
(52) June 21, No. 389.
(53) June 21, No. 383.
(54) July 2, No. 573.
(55) June 2, No. 310.
(56) Apr. 29, No. 123, P. L. 536.
(57) June 2, No. 302.
(58) June 25, No. 434.
(59) June 25, No. 435.
(60) July 1, No. 504.
(61) Mar. 10, No. 18, P. L. 43; June 30, No. 458.
(62) July 1, No. 541.
(63) July 2, No. 557.
(64) Apr. 8, No. 70, P. L. 282.
(65) Apr. 8, No. 64, P. L. 253.



George Washington Bridge, one of the engineering show places of the convention city

ELECTION BALLOT

OFFICERS FOR 1938

Note—If you have not already sent in your ballot, please do so at once.

for PRESIDENT

ARTHUR V. SHERIDAN—New York ..... ☐

..... ☐

for VICE-PRESIDENTS

(Vote for four (4)

PERRY T. FORD—Ohio ..... ☐

FREDERICK H. DECHANT—Pennsylvania ..... ☐

C. E. BARDSLEY—Missouri ..... ☐

WM. FURBER SMITH—Oklahoma ..... ☐

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for TREASURER

WALTER L. SIMPSON—Washington, D. C. ..... ☐

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THIRD ANNUA

NATIONAL SOCIETY OF
NEW YORK CITY—TO

ARTHUR V. SHERIDAN, *Pr*
National Society of Professiona

Member States of th

California	Indiana	Missou
Connecticut	Kentucky	Nevada
District of Columbia	Louisiana	New Je
Illinois	Massachusetts	New M
		West V

THE PROGRA

FRIDAY, OCTOBER 8th

10:30 A. M. Registration of delegates and guests
Exhibition—West Ballroom

1:00 P. M. General Assembly convenes on call of Secretary, N.S.P.E.
Address of welcome by City officials
Reply by President, N.S.P.E.
Reports of Officers
Appointment of Committees

2:30 P. M. Business Assembly, Vice-President presiding
Presentation of major (national) topics for the deliberation of the Convention. Each topic will be outlined by a representative of the Society and will be followed by discussion from the floor. (Exception—Unions and Professions will be presented Saturday, October 9th, A. M.) Resolutions will be submitted Saturday, October 9th, A. M.

4:00 P. M. Vice-President presiding
Discussion of State and Chapter problems
Open Forum

7:00 P. M. Joint Dinner and Business Meeting:
Officers, Directors and State officials of the National Society of Professional Engineers, and the Officers and Directors of the New York State Society of Professional Engineers.

A CONVENTION

F ROFESSIONAL ENGINEERS
Y—CTOBER 8th and 9th

V. S[illegible]AN, *President*
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Ohio
Oklahoma
Pennsylvania
Rhode Island
Tennessee
Texas
Virginia

E PROGRAM

SATURDAY, OCTOBER 9th

Exhibition—West Ballroom open all day

10:00 A. M. Business Assembly—President presiding
Reports of Tellers

10:10 A. M. Presentation by conversant representative of the Society of the question: How shall the professional man, especially the Engineer, preserve his identity, his professional status and his moral obligations to Society against coercion by organized labor and organized industry. What of the challenge of C.I.O.?

12:00 Noon Presentation of Officers for 1938

12:10 P. M. Resolutions

12:45 P. M. Adjourn

1:00 P. M. Luncheon Assembly
Speakers (date of this announcement, September 23d)
Hon. Herbert H. Lehman, Governor of the State of New York
Hon. Fiorello H. LaGuardia, Mayor of the City of New York
Major General Edward M. Markham, Chief Engineer, U. S. Army
President, American Bar Association
President, American Medical Association
President, American Institute of Certified Public Accountants
President, American Institute of Architects

4:00 P. M. Continued if necessary

Rockefeller Center from the east showing the 70-story RCA Building in the center with La Maison Francaise (left) and the British Empire Building (right) at its base

Turret of the Empire State Building showing its "Sky-high" mooring mast

within the beds of streams and other waters. All present and future encroachments on such lands, not authorized by a lease, are made unlawful.[66] The board is directed to make a survey to determine what encroachments now exist. $50,000 is appropriated for this purpose.[67]

By another act, all rights, grants and privileges, heretofore or hereafter granted, in the bed of any navigable waters, is declared void, whenever it becomes or is deemed derogatory or inimical to the public interest or fails to serve the best interests of the Commonwealth.[68]

The Dam Act of 1913 was amended so as to permit the Water and Power Resources Board to require and enforce the alteration or change in structure or location of any dam or other water obstruction.[69]

A very far-reaching water pollution act was among the outstanding accomplishments of this legislature. The purposes, as stated in the title of the act, are, "for the protection of public health, animal and aquatic life, and for industrial consumption and recreation."[70]

Townships of the first class were authorized to develop their own water supply.[71] Cities of the second class are authorized to construct waterworks and to supply water either within or without their corporate limits,[72] and further to issue non-debt revenue bonds for the construction, acquisition, extension or improvement of waterworks.[73]

Buildings. Safety and Sanitation

The very elaborate Philadelphia Building Law of 1929 was repealed, and supplanted by a brief general provision, applicable to other municipalities as well, authorizing the adoption of building ordinances.[74]

The Fire and Panic Act of 1927 was twice amended so as to include additional types of buildings to be designated from time to time by the Department of Labor and Industry, authorizing the department to close buildings until its recommendations are complied with, and making a number of additional safety provisions.[75]

The second class city plumbing act was extended to boroughs of 3,500 or more population, and to incorporated towns and townships of the first class, as well as to include provisions for building drainage and various other changes in regulations.[76]

The Elevator Law, heretofore applicable "outside of cities of the first and second and second A classes," was extended so as to apply within these cities as well.[77]

The Boiler Inspection Law was amended so as to include unfired pressure vessels carrying a pressure of more than fifteen pounds per square inch,[78] and to certain boilers heretofore exempt from the provisions of the law.[79]

This review is necessarily so brief as to be confined to suggestions for further inquiry, rather than to give accurate information on the more or less involved details of the numerous provisions of general interest, or of special interest to any limited group. It has been our aim to call attention to the existence of a larger number of these laws, rather than to spend the allotted time in going into detail over a few.

(66) Apr. 14, No. 81, P. L. 297.
(67) July 2, No. 556.
(68) June 25, No. 425.
(69) May 6, No. 137, P. L. 559.
(70) June 22, No. 394.
(71) May 20, No. 204, P. L. 756.
(72) July 1, No. 509.
(73) July 1, No. 507.
(74) Apr. 14, No. 87, P. L. 313.
(75) May 28, No. 281; June 5, No. 349.
(76) Mar. 31, No. 44, P. L. 168.
(77) Apr. 8, No. 69, P. L. 277.
(78) May 27, No. 244, P. L. 1912.
(79) June 5, No. 347.

The Engineer and His Societies

(Continued from page eight)

the greatest years of service nor was he in charge of what was considered the most important department. He was a man who had the capacity of viewing the operations of each department from all angles. He had to be a man with an appreciation of the work of each department and yet have the ability to best guide the efforts of each department toward a unified goal.

A unified engineering profession should be the goal of every engineer. Through his various societies every engineer can do much to obtain this result. No doubt the process will be slow and there will be many discussions and much time spent in arriving at a suitable basis for unification. However, it is hoped that in the not too distant future engineering will succeed as a unified and organized profession.

ENGINEERING EXAMINERS TO MEET IN SCRANTON

On October 11, 12 and 13, the convention of the National Council of State Boards of Engineering Examiners will be held at Hotel Casey, Scranton, Penna.

The Council is made up of representatives of the Engineers Registration Boards of different states. The annual convention was held at Knoxville, Tenn., last October and twenty-six states were there represented. It is hoped that at least thirty states will be represented at Scranton.

Registration will commence at 9:30 A. M., October 11th and the first business session will start at 10 A. M. There will be business sessions on the morning and afternoon of the first and second days. The third day will be reserved for sight-seeing and inspection trips, arrangements for which can be made during the sessions of the convention.

The business to be considered will include reports of the following standing committees, Accredited Engineering Schools, Uniform Examinations for Registration, Legal Procedure, National Bureau of Engineering Registration, Engineers Council for Professional Development and Constitution.

The committee on the National Bureau of Engineering Registration will submit a report on proposed procedure.

The afternon session of the second day will be set aside for round table discussions of problems of administration and enforcement of registration laws. While discussion will be limited to accredited delegates and delegated representatives of National Societies, engineers and others who are interested, will be welcome to all sessions.

The high spot of the convention will be the annual dinner which will take place at Hotel Casey at 6:30 o'clock on Monday evening, October 11th. Colonel C. E. Myers of Philadelphia, President of the Pennsylvania Board will be toastmaster. Prof. J. S. Dodds, President of the National Council, will speak on "Purposes and Activities of the National Council." The main address will be made by Colonel Willard Chevalier, Vice President of the *Engineering News-Record,* a speaker of national reputation. The Presidents and Secretaries of the National Engineering Societies will be honor guests. The dinner is open to any engineers and others who are interested. Ladies will be present and it is hoped that many of the engineers who may attend the dinner will be accompanied by their wives and friends. The cost of the dinner will be $2.00 a plate which will include gratuities.

Reservations for the dinner should be addressed to George W. Wilson, Vice President of the International Correspondence Schools, Scranton, Pa., and should reach him on or before Friday, October 8th.

A. B. Clemens, *Chairman*
Local Committee, Scranton, Penna.

Security of Employment in the Engineering Profession

(Continued from September Issue)

Table 7.—Distribution of All Engineers Reporting Pension Privileges, by Field of Employment, at End of 1934

Field of employment	Number					Percent				
	Total	No pension	Pension privilege		Not reporting	Total	No pension	Pension privilege		Not reporting
			Contributory plan	Noncontributory plan				Contributory plan	Noncontributory plan	
All employments	35,559	20,556	6,684	3,957	4,362	100.0	57.8	18.8	11.1	12.3
Private enginering	21,604	13,207	2,265	3,387	2,745	100.0	61.1	10.5	15.7	12.7
Construction	3,437	2,445	174	138	680	100.0	71.1	5.1	4.0	19.8
Extractive industries	1,841	1,109	272	200	260	100.0	60.2	14.8	10.9	14.1
Public utilities	4,183	1,833	341	1,555	454	100.0	43.7	8.2	37.2	10.9
Transportation	1,255	576	120	416	143	100.0	45 9	9 6	33.1	11.4
Manufacturing	10,888	7,244	1,358	1,078	1,908	100 0	66.5	12 5	9 9	11.1
Public enginering	11,177	5,791	3,827	357	1,202	100.0	51.8	34.2	3.2	10.8
Federal Government	4,649	1,850	2,009	248	542	100.0	39.8	43.2	5.3	11.7
State and county governments	4.438	2.723	1,193	58	464	100.0	61.3	26.9	1.3	10.5
Municipal governments	2,090	1,218	625	51	196	100.0	58.3	29 9	2.4	9.4
Personal service	2,778	1,553	592	213	415	100.0	56 1	21.3	7.7	14.9

On the other hand, of the engineers engaged in private engineering, the largest proportion was covered by noncontributory systems. However, within the private-engineering group marked differences were shown; the same was true of the three categories of public engineering.

The largest number of professional engineers covered by a pension plan were those in the employ of the Federal Government. Out of a total employment of 4,649 engineers reporting, 43.2 percent were under a contributory and only 5.3 percent under a noncontributory plan. The corresponding proportions in positions with State and county, and municipal governments were very much less—26.9 and 1.3 percent, and 29.9 and 2.4 percent, respectively. This order of difference parallels that of the proportions of engineers under civil service in these three classes of employment, but only in the case of the Federal Government are the two proportions closely related. This arises from the fact that, whereas all persons under Federal civil service must contribute to the retirement fund, this is not true to the same extent for employments under State and county, and municipal governments, where age, length of service, and salary are also taken into consideration.

Among the remaining fields of employment, public utilities and transportation reported the next highest proportions (after Federal employment) as having pension privileges. Public utilities and transportation used the noncontributory scheme; this type of plan covered 37.2 percent in utilities and 33.1 percent in transportation; contributory systems covered only 8.2 and 9.6 percent, respectively, of those reporting. For the three remaining pursuits shown under private engineering, the largest number of engineers with pension privileges did not exceed 25.7 percent, and in all cases contributory schemes predominated.

From the preceding discussion of the pension privileges it is quite evident that the kind of employment has a marked effect upon the question of the installation of a pension scheme. In no type of engineering employment was a majority of the reporting engineers protected by such a plan.

Patent Privileges in the Engineering Profession

Information as to patent privileges was furnished by 61.6 percent of the 35,559 reporting engineers with engineering jobs at the end of 1934 (table 8).

Of all engineers covered, 31.7 percent reported retention of the patent rights for all inventions made either in the course of their work or in fields not directly related to their work. Among the nine separate fields of employment this was true of the largest group in each case, except in manufacturing where the highest proportion (30.1 percent) reported that they had no rights to patents relating to their work, but did retain their rights to those not directly related to their work. This latter combination ("(1) No, (2) Yes," in table 8) ranked second in importance and included 16.9 percent of the 35,559 engineers. The third group in importance (including 4,575, or 12.9 percent) was that reporting complete restriction on both aspects of patent privileges. Only 42 engineers, less than one-tenth of 1 percent of the total, reported that they retained the rights to inventions connected with their duties but not to those not so connected.

It would seem that, comparatively, there is only slight restriction on the retention of patent rights among professional engineers, although its extent varies in the different fields of employment. Thus, relatively, the greatest restriction was placed upon engineers engaged in manufacturing, 19.0 percent of whom reported complete restriction, 30.1 percent the right to patent inventions not directly related to their work but not to those made in the course of their work, and only 23.1 percent no restrictions. In the extractive industries the limitations, while less severe than in manufacturing, were nevertheless greater than in any of the other branches of private engineering. Complete restriction was reported by 15.6 percent of the engineers in the extractive industries, by 11.8 percent of those in construction, and by 11.4 percent of those in transportation; the smallest proportion, 8.9 percent, was reported for engineers in the employ of public utilities.

It has already been noted that in manufacturing some 30.1 percent of the engineers so engaged had the right to patent inventions not directly related to their work, but not to those made in the course of their work. This partial restriction was very much less for the remaining fields of activity in private engineering. In the case of ex-

Table 8.—Distribution of All Engineers Reporting Patent Rights, by Field of Employment

Field of employment	Right retained to inventions (1) made in the course of work, and (2) not directly related to work					
	Total	(1) Yes; (2) yes	(1) Yes; (2) no	(1) No; (2) yes	(1) No; (2) no	Not reporting
	Number					
All employments	35,559	11,363	42	6,017	4,575	13,662
Private engineering	21,604	6,499	29	4,801	3,279	6,996
Construction	3,437	1,178	5	294	405	1,555
Extractive industries	1,841	601	2	342	288	608
Public utilities	4,183	1,771	6	670	374	1,362
Transportation	1,255	434	3	217	143	458
Manufacturing	10,888	2,515	13	3,278	2,069	3,013
Public engineering	11,177	3,364	10	946	1,150	5,707
Federal Government	4,649	1,009	3	582	567	2,488
State and county governments	4,438	1,587	5	249	386	2,211
Municipal governments	2,090	768	2	115	197	1,008
Personal service	2,778	1,400	3	270	146	959
	Percent					
All employments	100.0	31.7	0.1	16.9	12.9	38 4
Private engineering	100.0	30.1	.1	22.2	15.2	32.4
Construction	100.0	34.3	.1	8.6	11.8	45.2
Extractive industries	100.0	32.6	.1	18.6	15.6	33.1
Public utilities	100.0	42.4	.1	16.0	8.9	32.6
Transportation	100.0	34.6	.2	17.3	11.4	36.5
Manufacturing	100.0	23.1	.1	30.1	19.0	27.7
Public engineering	100.0	30.1	.1	8.5	10.3	51.0
Federal Governments	100.0	21.7	.1	12.5	12.2	53.5
State and county governments	100.0	35.8	.1	5.6	8.7	49.8
Municipal governments	100.0	36.7	.1	5.5	9.4	48.3
Personal service	100.0	50.4	.1	9.7	5.3	34.5

tractive industries, only 18.6 percent so reported, in transportation 17.3 percent, and in public utilities 16.0 percent. Partial restriction affected only 8.6 percent of the engineers engaged in construction. These same four fields of activity did, however, report larger proportions as being unrestricted with regard to patent privileges. These ranged from 32.6 percent for extractive industries to 42.4 percent for public utilities. In this regard, it will be recalled that only 23.1 percent of the engineers in manufacturing so reported.

In the three classes of public engineering, there was a marked divergence in the restrictions placed upon patent privileges. This was greatest for engineers in the employ of the Federal Government, 12.2 percent of whom had no patent privileges whatsoever; whereas in State and county, and municipal governments, only some 9.0 percent were under complete restriction. Partial restriction affected 12.5 percent of the Federal Government engineers, but only about 5.5 percent of those in the other two public employments. The greatest divergence occurred for those engineers who reported they had the right to patents made in the course of their work and also to those not directly related to their work. This group included only 21.7 percent of Federal Government engineers, whereas for State and county, and municipal governments, the percentages reported were respectively 35.8 and 36.7.

Relative to all other fields of employment, the least restrictions were found in personal service, where 50.4 percent reported unrestricted patent rights, 9.7 percent partial restriction, and only 5.3 percent no patent privileges. This freedom from restriction in the retention of patent rights for engineers in the personal service group was due to the preponderance of teachers in this group, as examination of table 9, giving the distribution by type of work engaged in, shows.

Engineers engaged in teaching were under the least restriction as to the retention of patent rights, and engineers in design and research were under the greatest restriction. Of the 9,050 engineers classified as working in design and research, only 23.5 percent had the right both to patents made in the course of their work and to those not directly related to their work. As many as 55.3 percent of the engineers engaged in the teaching of engineering subjects so reported. For the remaining five lines of work, the proportions with full rights to patents ranged from 29.9 percent in sales to 33.6 percent in general administration and management.

Relatively, the largest proportion of engineers who were partially restricted in regard to patent rights (26.6 percent) was reported for design and research. Even in the case of sales, some 20.5 percent were classified under this "No-Yes" combination. By contrast, only 18.1 percent of the engineers engaged in operation and 16.0 percent in general administration and management were restricted only as to patents relating to their work. The corresponding proportions in construction, consulting, and teaching were very much less, ranging from 8.7 in construction to 9.7 in teaching.

The largest relative percentage completely restricted was 19.4—for the engineers engaged in sales—with design and research following next in order (15.8 percent). From this point the proportion ranged downward to 13.4 percent in operation, 12.1 percent in general administration and management, 11.5 percent in consulting, and 10.8 percent in construction. The lowest percentage under complete restrictions, namely 4.4, was noted in teaching.

Table 9.—Distribution of All Engineers Reporting Patent Rights, by Type of Work Engaged in, at End of 1934

Type of work	Right retained to inventions (1) made in the course of work, and (2) not directly related to work					
	Total	(1) Yes; (2) yes	(1) Yes; (2) no	(1) No; (2) yes	(1) No; (2) no	Not reporting
	Number					
All types	34,101	10,828	40	5,779	4,401	13,053
Design and research	9,050	2,128	13	2,404	1,430	3,075
Construction	8,233	2,739	8	717	892	3,886
Operation	8,276	2,737	10	1,494	1,108	2,927
Consulting	2,146	695	3	202	246	1,000
Teaching	2,050	1,132	3	199	90	626
Sales	1,513	453	2	310	293	455
General administration and management	2,833	953	1	453	342	1,084
	Percent					
All types	100.0	31.8	0.1	16.9	12.9	38.3
Design and research	100.0	23.5	.1	26.6	15.8	34.0
Construction	100.0	33.2	.1	8.7	10.8	47.2
Operation	100.0	33.1	.1	18.1	13.4	35.3
Consulting	100.0	32.4	.1	9.4	11.5	46.6
Teaching	100.0	55.3	.1	9.7	4.4	30.5
Sales	100.0	29.9	.1	20.5	19.4	30.1
General administration and management	100.0	33.6	(1)	16.0	12.1	38.3

(1) Less than 1/10 of one percent.

Readjustments Required for Recovery

Reprint from Public Affairs Pamphlet No. 11, published by Public Affairs Committee, National Press Building, Washington, D. C.

Continued from September Issue

Sources of Government Funds

When a government needs money, it can always obtain it by one means or another. In earlier days it was a common practice for the King's Treasurer to clip all coins passing through his hands, thus reducing their metallic content. A simpler device in recent years has been to print government promises to pay on paper notes and require that they be accepted. A somewhat more refined method, widely used during the World War, is for the Treasury to borrow the required money from the banks in exchange for interest-bearing bonds. The banks are then permitted to issue their own notes on the backing of the government bonds. In each case the ultimate result is the same. If widely practiced, the currency tends to decline in value, both in comparison to foreign currencies and to goods. Commodity prices tend to rise.

During the depression the United States has relied primarily on its ability to borrow money in the financial markets. Just how much of this money was obtained from the savings of individuals and how much was created by an expansion of bank credit is unknown. But it is known that more than 9 billion dollars' worth of bonds were absorbed by the Federal Reserve Banks and commercial banks that are members of the Federal Reserve System. Since the opportunities for ordinary commercial loans are far below normal, the banks have more and more come to rely on government loans as an opportunity to invest their surplus funds. If the money obtained by the government were all used, as some of it is, in self-paying enterprises, the basic situation would not be different from what it is when loans are made to private companies. But to the extent that the money has been used for relief and other non-returnable purposes, the loans represent a charge against taxpayers in general.

Why Interest Rates Are Low

Fortunately for the government, most of the recent loans have been contracted at an extremely low rate of interest. Thus while the debt has more than doubled, the annual interest charge has only increased from 606 million to 845 million dollars—about 23 per cent. Is this the result solely of increasing confidence in the soundness and stability of the government? Let us see what other factors might affect the situation.

The amount of money which a bank has available to buy government bonds depends, in the last analysis, on the amount of its reserves. The law requires that a certain proportion of the deposits of a bank which is a member of the Federal Reserve System must be kept on deposit with the Federal Reserve Bank. During recent years the total bank reserves have been tremendously increased by heavy imports of gold and by money poured into the banks when the Federal Reserve Banks bought huge amounts of government bonds from the public. And since there has been an abnormally small demand for funds for private financing, huge "excess reserves" have piled up in the banking system. With money so plentiful, it was only natural that interest rates should decline. The government has been able to take advantage of these low rates by shifting to short-term borrowing, because of confidence in the soundness of its credit. But should it appear that the government will have difficulty in balancing its budget over a period of years, this confidence would be shaken and the government would have to pay a much higher rate of interest. It is necessary to examine the budget prospects somewhat in detail.

The Budget Problem

The *President's Budget Statement* of September, 1936, contained the following estimates for 1937: The figures are in millions of dollars.

Interest	825	Public Works	834
Pensions (military)	600	Aids to home owners	188
National defense	920	Miscellaneous	216
Civil departments, and agencies	946	Debt retirement	580
Relief	1,659	Social Security	405
Agricultural aid	649	Total	7,822

Assuming that both revenues and expenditures turn out as expected, what is the prospect of bringing the budget into balance in the near future? First, let us see what can be cut from expenditures. Interest charges cannot well be reduced. In fact, they are almost certain to rise with the return of more normal business activity. At present about 13 billion of the federal debt is in short or middle-term notes. Transferring it to a long-term basis, which is highly desirable, would also increase interest rates. So it is likely that in the future this item will run well over a billion dollars.

Nor is there much of a chance that military pensions or the expenditures for defense will be curtailed. Some, but very little, savings might be achieved without injuring the efficiency of the civil dpartments. The social security outlay is fixed by law. Thus whatever reduction is to be achieved will have to come out of relief and emergency outlays. In order to bring the budget down to 6 billion, these reductions would have to run something like this:

	1937 Estimate		*Assumed Reductions*
Relief	1,659	(In millions)	1,000
Agricultural aid	649		300
Public Works	834		300
Aids to home owners	188		100
Miscellaneous	216		100
Total reductions			1,800

The estimated revenues for the 1937 fiscal year, exclusive of social security taxation, amounted to 5,341 million dollars. Even with the $1,800,000,000 reduction, we would be approximately 600 million short of a budget which would provide a sinking fund for debt retirement.

In considering the possibility of closing this gap by increasing taxation we must keep in mind the fact that taxes will be substantially raised over present levels by the Social Security Act. Six billions of federal taxes plus six billions in state and local taxes totals up to about one-fifth of the national income. Unless we wish to run the risk of seriously impeding business activity, it is obvious that we must endeavor to bring about a substantial curtailment in expenditures. This can only be achieved by overhauling our whole system of relief. No one would contend, however, that such expenditures should be ruthlessly curtailed without thought of the consequence to those who are unable to find employment.

The Threat of Inflation

From the above survey, it is evident that the danger of a breakdown of government credit is still a real one. We are gambling, so to speak, on the hope that increased prosperity will bring an increase in government revenues before confidence in the government wanes. If we lose, and confidence in government credit is severely shaken, it will become necessary for the Treasury to resort to other devices to get the money it requires. The money could be obtained, but only by resort to direct or concealed inflation. And history has shown that once the inflationary path is taken, it is virtually impossible to check the downward flight in the value of a country's currency.

An inflation is deceptive since it appears to yield great money profits. Actually it brings a complete dislocation of economic activity which can only result in a reduction in the national income—as measured in goods and services— and a drastic lowering in the living standards of the masses. While it may prove possible in some cases to check the inflationary process short of complete disaster, such a result cannot be guaranteed and can only be achieved, if at all, at tremendous cost.

INTERNATIONAL ECONOMIC POLICIES

The failure of foreign trade to revive as rapidly as domestic trade is not taken very seriously by the average man-on-the-street. After all, he says, our foreign trade was never more than a small fraction of our total business. Why trouble over it? In 1929, when our exports were at their peak, they amounted to only 9.8 per cent of our total output of goods. By 1935 the proportion had dropped to 7.5 per cent. It is argued that even a complete cessation of trade would make little difference to our national prosperity.

This argument sounds plausible until one stops to think of specific industries and regions. What would happen to the South, for instance, if our export trade were further curtailed? In 1929 it depended on foreign markets to absorb 55 per cent of its cotton crop, 41 per cent of its tobacco, 50 per cent of its turpentine, 60 per cent of its rosin, and 43 per cent of its cottonseed oil cake. Even in 1935 it still exported nearly 50 per cent of its cotton, 35 per cent of its tobacco, 40 per cent of its turpentine, 50 per cent of its rosin, and 50 per cent of its cottonseed oil cake. The decline in the export market for cotton and tobacco accounts for two-thirds of the decline in the production of those commodities since 1929. A complete loss of our overseas markets would virtually destroy the primary source of cash income for nine states of the Southeast. Sufficient cotton for domestic uses can be grown in the Delta region and the Southwest, and be grown more efficiently than in the old cotton belt.

Our economic machine is not fixed so that a small portion of it, say 5 or 7 or 10 per cent of it, produces goods and services for export while the remainder, working independently, produces solely for the home market. It is all interconnected. A decline in the amount of exports of a certain type of goods forces one of two adjustments in the industry affected. If it continues full production, surpluses will accumulate, prices will fall, and the income of all producers will be curtailed. And yet if it cuts output in order to maintain prices, unemployment ensues with a resulting reduction in incomes.

In either case the loss in the exporting industries effects the entire economic system. If cotton growers have lower incomes, they will buy less food, fewer automobiles, and build a smaller number of houses. The losses in these industries, in turn, are passed on to others with cumulative effect, once the vicious circle of deflation is started. The reduced volume of exports is responsible for a substantial share of the present volume of unemployment in the United States. It has been estimated that 3 million persons were directly engaged in production for foreign markets in 1929. Today the number is probably no more than 1½ million.

Imports Also Needed

If we wish to sell more cotton, tobacco, wheat, automobiles, or steel abroad, it will be necessary for us to buy more goods abroad. For trade must be a two-way affair. Foreigners must have dollars if they are to buy our products. While dollars may be obtained in several ways, by far the most important method, in practice, is the sale of foreign commodities in this country.

Imports are also essential to the smooth operation of our economic mechanism. There are a large number of commodities which are not produced at all in the United States. In other cases the domestic output is either inferior in quality or far more expensive than similar foreign goods. Where the United States produces an article but does so less efficiently than a foreign competitor, it is often beneficial to permit some imports as a means of compelling the domestic producer to improve his technique of production.

The sharp decline in foreign commerce during the depression has been due to two factors: (1) the general reduction of business activity in all countries, and (2) the character and extent of governmental regulation of trade. During the early days of the crisis, the first factor was chiefly responsible for drop in trade; but its subsequent failure to increase in proportion to the rise in business activity is attributed primarily to tariffs, quotas, exchange control, and other governmental restrictions which have sprung up during the depression.

There can be no question that the United States has been as responsible as any country for the growth of these restrictions. It has long protectionist history, and the passage of the Hawley-Smoot Tariff at the outset of the crisis was a signal for a wave of restrictive measures everywhere. To a certain extent these measures were forced on debtor countries as the only means of conserving their dwindling gold reserves; but in part they were merely the result of bitterness and retaliatory action. Although the United States was the initiator, many other countries soon outstripped us by invoking new restrictions which were far more stringent than the tariff. Some countries established quotas which limited the total amount of a commodity that could be imported in a given month to certain number of pounds or tons, usually a very small amount. Others cheapened the price of their export goods, and made it more difficult for their citizens to buy abroad by depreciating the value of their currencies. Still others made it extremely difficult for their importers to obtain foreign currency through what was known as "exchange controls."

The Trade Agreements Act

During the first four years of the depression all efforts to halt this suicidal wave of "economic nationalism" proved unavailing. The World Monetary and Economic Conference of June, 1933 was disrupted by the decision of the United States to embark on a policy of currency depreciation of its own. But a year later, in June, 1934, the United States embarked on an experiment which constituted a sharp departure from its post-war commercial policy. The Trade Agreements Act authorized the President to enter into commercial agreements with other countries to modify customs duties, and to bind against

(Concluded in November)

Open Forum

Dear Editor:

I am attaching a copy of the August *News Letter*, the first of our publications. This, I hope, will suffice as our contribution to the pages of the AMERICAN ENGINEER.

It is my desire and intention to submit more material of national interest, but the requirements of my own business take me away so much it has been almost impossible to give the time necessary.

The AMERICAN ENGINEER is performing a very definite and valuable service, and I wish to express my appreciation of a zealous support of a noble principle.

Yours very truly,
W. H. MCDILL,
Secretary-Treasurer,
Missouri Society of
Professional Engineers.

Dear Editor:

In the August issue of the AMERICAN ENGINEER appeared a reprint of a paper by Engineer Martin Bernhardt. He says: Opportunity is like two willing hands, one alert brain and one strong will.

What could be more inspiring especially to the Engineer, whose business consciousness not so long ago had to be awakened from a drowsy lethargy! Here our professional engine receives a new spark. Can we hope that it will start this engine on a faster pace? It surely will, if we allow the spark to fire us with new ambition.

We must spur our WILL to do some bright thinking with our BRAIN and use our hands to DO the right thing.

But what is the right thing? Let us all gather around the council table, as Engineer Bernhardt puts it, and search for the right thing to DO.

Several years ago I saw on the wall of an Office this meaningful writing:

Knowing what to do next is WISDOM
Knowing how to do it is SKILL
And *DOING* it is Virtue

Reads like Engineer Bernhardt's philosophy sprung from some other active mind.

Yes, we have to DO something. Here is one proposition as to what to DO:—

When an ambitious person wants to go into business, he first approaches his fellow citizens by handing out his business card. The Engineers should DO likewise.

Let us design, by competition, a pattern for a SIGN which should be approved by our National Society as the only Official Pattern for the Profession. The pattern should be trade-marked by the U. S. Patent Office and the signs themselves should be given a unique finish.

Each Member of the National Society of Professional Engineers shall then purchase his own particular sign from Headquarters, who shall sell at a reasonable profit for the National Society to Members only throughout the country.

It will not be long until our fellow citizens take notice of the new attractive sign. Not much later will *they come* to find out what we can do for them or what (service) we have to sell. Years ago the layman knew nothing about the microfarad. Since the event of the radio, many have spent late hours at night to find out. Many will want to know what is behind this *new* sign, even if only curiosity is the driving power.

Here is my vision of what may take place:

Take for instance a manufacturer of delicate instruments. On his way home last night he was rather worried about the many rejections in his shop, since the days began to grow shorter. The Northern exposure of his shop windows was none too conducive to the good workmanship required for the production of instruments. The electric lamps were all burning. So he did not even suspect that they might hide the secret of imperfection, while they were shining brightly.

The manufacturer is now on his way to catch the 7:32 A. M. train. Before crossing the street, he looks up and his eye is caught by one of these new signs, which lately have appeared sporadically in his home town. Despite the still low position of the sun, he clearly reads U. R. Name, and underneath "Professional Engineer."

He makes his train.

While he is comfortably seated, the impression of this new, unique sign still lingers on, and that makes him think.

On this trip to the shop, he actually does discover the Professional Engineer. The manufacturer meets and talks to this Professional Engineer when he passes his house on the return trip home. Not long afterwards the production records from his shop show unexpected improvement. And besides the manufacturer has learned something about the lumen, the angle of incidence and the glare of light.

The Professional Engineer on the other hand begins to realize that the manufacturer would not have come to him, if that attractive sign had not been at the door. Better leave it there. The Doctor across the street, he has a sign too for a good reason. The Engineer's confidence in his business ability grows.

In addition, as soon as the attractive power of the OFFICIAL SIGN becomes known among the other Engineers, the outsiders, they will soon take the various steps which will ENTITLE them to apply for a sign of their own. Our Membership grows.

Who would want to say that with more signs out, the ENGINEERS' OPPORTUNITY would not increase?

Others than the manufacturer will call at the Professional Engineer's door. The man who lives at the outskirts of the town near the High Bridge may call to find out whether he shall contract with the Light and Power Co. for a new feeder line, or whether the waterfall in the rear of his property will be enough to light his house. Someone else may come to have the Investment Brokers claims about a new alloy verified by the Engineer. Or near election time, the Taxpayers Club may ask the Professional Engineer to address them, engineering-wise, on the proposed Sewage and Waste Disposal Plant, for which appropriations are asked in Question One of the Ballot. Let us try it and see what else there may be in store for us.

Will the National Society of Professional Engineers DO something and ask for proposals of the Pattern and Finish of OUR OFFICIAL SIGN, arrange for its fabrication and sale?

Let us continue this Engineers' Opportunity teaser in these columns. And you, dear reader, may be the next one who will tell us what else we can DO to enhance the ENGINEERS' OPPORTUNITY.

HANS B. LIPPELT,
9428 78th Street,
Ozone Park, N. Y.

Dear Editor:

I note by the *Philadelphia Legal Intelligencer* that on September 13th the President signed a Real Estate License Law for the District of Columbia effective within 90 days. The news item reads as follows:

> "The act follows the general pattern of license legislation already in force in 30 States and 4 Canadian Provinces for the protection of the public against irresponsible or incompetent real estate agents. It provides for examination of applicants for license. Causes for revocation of license (as in the Nebraska, Ohio, Maine, and West Virginia laws) include many of the provisions agreed to be unfair trade practices by the real estate industry in the formulation of its old National Recovery Administration code. These include misrepresentation, acting for one party without the knowledge of all parties, incompetence, using any trade name or insignia of a real estate organization unless entitled to it, guaranteeing future profits from resale of property, placing of signs on property without owner's consent, offering free lots, conducting lotteries or contests as a method of obtaining buyers.
>
> "Real estate licenses issued by the various States are recognized, but nonresidents must qualify by paying a fee."

QUERY: How much more important and why not an Engineering Registration Law for the District of Columbia?

SAMUEL I. SACKS,
Chairman Legislative
Committee.
National Society of Professional
Engineers.

Dear Editor:

I note that your synopsis of Existing Laws in the various states on page 16 of the September issue of the AMERICAN ENGINEER, you correctly say that a bill for the "Registration of the Professional Engineers" failed to pass in Illinois on the basis of Labor Union opposition. You may be interested to know that the bill providing for the Registration of Land Surveyors did pass at the last session of the Illinois Legislation. This bill was known as House Bill No. 423 of the 60th General Assembly.

Yours truly,
W. D. JONES, *President*,
Illinois Society of Professional Engineers

Current Opinion

EXPERTS NOT WANTED?

From the *New York Times,* Sept. 21, 1937

Mr. Roosevelt, for a man who believes in economic and social planning, apparently has little use for the expert. He is all for the amateur, but he calls the amateur a layman. He said last Saturday that the United States Constitution was a layman's document, and he poured scorn on the lawyers. He operates the national finances on what he calls a layman's budget. He seems to cherish a distrust of professionalism. He seems to be in hearty agreement with Bernard Shaw, who said many years ago, in "The Doctor's Dilemma," that every profession is a conspiracy against the laity.

This is a perfectly tenable position, but only for the *laissez-faire* man who believes in struggle and chaos and everybody as good as everybody else. But how can we have a planned and orderly world if the amateur is always better than the expert?

SOME OTHER CASES

If the best results are obtained by layman financiers and layman lawyers, it may be that public health is best served by amateur doctors, that soil erosion is most easily conquered by amateur soil engineers, and the nation's ships best navigated by layman captains, and the nation's airplanes most safely flown by layman pilots.

It is odd, to put it mildly, that President Roosevelt wants to eliminate the drift and waste and clash in our life and bring in science and purpose and order, and proposes to do so by discarding the trained man and bringing in the amateur. Only a little while ago the hope of a new world was all in technicians; now it is in laymen.

THE KING OF BRIDGES

By Mrs. Walter Ferguson

Reprint from the Pittsburgh Press

VACATION NOTES—San Francisco at last. The first thing that rivets attention as you drive in from the West is the bridge. From afar it is a long slender line against the sky, but a closer view shows it to be a thing of incredible strength and massiveness.

Is there anything more beautiful than a bridge? Certainly nothing made by mortal hands, and here is the very king of bridges, so thrillingly lovely it takes your breath away. It soars across the water like a winged creature. In the very center of the wide bay it tunnels into the heart of a small island, and emerging soars onward once more, like some proud Pegasus bearing lightly its human burden.

God made the Pacific, and as a well-known wit once said, it is a great success. But how much more wonderful it is that man made the San Francisco Bridge.

Yet I dare say very few people know the names of the men who planned and built it. Huey Long will find a place in history and every school child will probably be familiar with his spectacular career; yet none will know or care about the individuals who planned and executed this tremendous feat, or remember the names of those who died in its building.

Isn't it strange that we, the people, realizing our ignorance of engineering, would never think of dictating to experts about the creation of such a structure, while every mother's son of us thinks he should have a say in Government affairs? It seems a pity we can't educate a few men in statecraft, as we educate engineers, and let them be judged by their accomplishments. Good engineers take care that their bridges don't fall down; they build not only for beauty but for permanence.

IN MEMORIAM

Abram Hussey, electrical engineer who for twenty-one years, until his retirement in 1934, was superintendent of distribution for the Brooklyn Edison Company, died recently of a heart ailment at his home in Chester, N. J., after a brief illnes. His age was 69.

Born in a log cabin in Lathrop, Mo., he went to work in Kansas City at the age of 15. He entered the electrical field later as a wireman's helper in Chicago. Later he became associated with the Niagara Falls Power Company, of which he became superintendent of construction.

Mr. Hussey left the power company in 1906 to become supervisor of transmission for the New York Central Railroad. He organized and trained forces electrifying a large portion of the road's trackage within this city's limits. By 1912 the total trackage electrified under his supervision was 280 miles.

In 1913 Mr. Hussey became superintendent of distribution for the Brooklyn Edison Company. He played a large part in the development of electric service and at one time more than 7,000 employes worked under him. In 1934, just after he retired, he was guest of honor in Brooklyn at a dinner given by officers and department heads of the company.

Surviving is his widow, Mrs. Stella M. Hussey. A funeral service will he held at Fairchild Chapel, 86 Lefferts Place, Brooklyn, at 8 P. M. today. Burial will be in Kensico Cemetery, Westchester County.

ENGINEER, WIFE TOIL IN DITCH ON LABOR DAY

Ex-WPA Supervisor Experiments on New Type of Piling

From the *Long Island Press,* Jamaica, N. Y.

A gray haired civil engineer, once supervisor of WPA sewer construction in Queens, and his pleasingly plump brunette wife, a former opera singer, toiled yesterday in a ditch on a Corona vacant lot at Otis avenue and Penrod street.

Elsewhere labor was celebrating its gains of the year in hundreds of outings but the elderly couple worked on. Occasionally husky neighborly youths joined them and without asking questions silently gave them a hand.

The engineer is Clarence R. Springer, director of the New York County chapter of the *National Society of Professional Engineers.* His wife is the former Yolanda Springer, former dramatic soprano of the concert and opera stage. They were toiling in the sun to test Springer's novel invention.

It is a new type of piling which he contends will withstand two to three times the pressure which any other type of piling now used will sustain.

"I call it a finoval, an oval with fins," Springer said. "The fins are not attached but are carried out from the steel as one piece. It is an oval with a curved fin coming out from each side. The oval is about 12 inches long and 6 inches wide. Since the fins come out from the long side they give width to the narrow side making the overall widths about 12 inches by 12 inches. The steel is three-sixteenths of an inch thick. The piling weighs about 27 pounds per linear foot."

PRIVATE RESIDENTIAL BUILDING GAINS 6%

The August record of total construction in the 37 Eastern States amounted to $285,104,100, as reported by F. W. Dodge Corporation. This contract volume compares with $275,281,400 for August of last year and with $321,602,700 for July of this year.

Of the August 1937 volume, $73,448,300 represented residential building, $117,209,800 non-residential building and $94,446,000 was for public works and utilities.

Commenting about the August construction total, Mr. T. S. Holden, vice-president of F. W. Corporation, stated that: "Approximately two-thirds of the July to August decline in contracts was due to a decrease in the amount of publicly-financed work. In addition, there occurred, also, a drop of more than $30,000,000 in the total fo- unusually large projects, jobs costing a million dollars and over and which happened to start during July rather than during August. In spite of these two adverse influences, the August total represented a gain of 4 per cent over last year and a decline of less than 11 per cent from July of this year.

"Disappointment in the August residential building total is not so great as would be indicated by the contract figures. Admittedly, residential contracts fell below the total for the corresponding month of the previous year for the first time during the recovery period, but the August, 1936 record was inflated by public housing amounting to almost $32,000,000. In the current month's record there was included less than $1,000,000 of public housing. Consequently, private residential building shows a 6 per cent gain over August of last year."

NEWS OF STATE SOCIETIES

CONNECTICUT

THE CONNECTICUT SOCIETY OF PROFESSIONAL ENGINEERS

On September 11th, the Connecticut Society of Professional Engineers held their first annual outing and dinner dance at the Madison Beach Hotel, Madison, Conn.

A goodly share of the Society's total membership, together with their wives, turned out in spite of threatening weather. A good time was had by all.

Outdoor sports, consisting of horseshoe pitching, soft ball, bathing and fishing, were held for the outdoor minded members; with darts, ping-pong and Bridge for those preferring the protection of the Hotel.

To the surprise of many, Engineers Blakely and Lipps were successful in wrestling the horseshoe pitching championship away from Engineer Watson and Engineer President Allan Hubbard.

Dinner was served at 7:00 P. M. during which several short talks were given.

Engineer President Hubbard spoke on the relationship of engineering to our social welfare and the ever-increasing threat of unionism in the engineering profession.

Past President Engineer Harry E. Harris also gave a short talk.

The Society was fortunate in having as its guest Joseph T. Shea, accompanied by Mrs. Shea, who spoke to the assembled group on a code of ethics for the professional engineer. Engineer Shea is President of the newly formed Massachusetts Society of Professional Engineers.

Dancing followed the dinner until a late hour.

Engineer Clarence A. Wiley was Chairman of the Outing Committee and was highly complimented by the officers and members on his work which made possible the first annual outing of the Society.

CONNECTICUT SOCIETY NOTIFIES POSSIBLE VIOLATORS OF STATE LAW

At the last meeting of the C.S.P.E. Board of Directors, the State Secretary was instructed to notify possible violators of the State Law having to do with the practice of professional engineering.

As the form adopted for the handling of such complaints might be of interest to other state societies, copy of letter is re-printed.

"As State Secretary of the Connecticut Society of Professional Engineers, it has been brought to my attention that you are practicing or advertising to practice professional engineering as defined by the State Statute.

"The following quotation is taken from the Registration Act, Chapter 176-b, 1935 supplement to the General Statutes, effective January 1, 1936: 'No person shall practice or offer to practice the profession of engineering in any of its branches including land surveying, or use any title or description tending to convey the impression that he is a professional engineer or land surveyor unless he shall have been duly registered or exempted under the provisions of the act.'

"My instructions from the Board of Directors of the Society are to notify the person or firm complained of. If, after reasonable time has elapsed, no improvement has been made of which I have had due notification, it is then my duty to report to the State Board of Registration who in turn should report to the Attorney General for legal action.

"The State Roster showing men registered as professional engineers does not show firms in whose employ they may be and it is possible your situation may be covered by this condition. It will be appreciated if you will send in such information which will enable us to meet the complaint with exact information.

"May I hear from you within thirty days.

Very truly yours,
State Secretary."

INDIANA

I. S. P. E. NEWS LETTER

Issued by the Indiana Society of Professional Engineers

Vol. 1 September 1937 No. 3

Engineers Discuss Merit System

The August meeting of the Indiana Society of Professional Engineers was enlivened, following the regular business session, by a program planned by the president, S. G. Cohen. The program was in the nature of a debate between two of the members on the question "Resolved that a Merit System or Form of Civil Service is desirable for Professional Engineers in Public Service." The affirmative side of the question was taken by Engr. H. L. White and the negative by Engr. Earl Feldman.

Although it was pointed out by President Cohen in introducing the speakers that their remarks were not to be taken as their personal opinions, inasmuch as the respective sides of the question were assigned to them, both speakers presented convincing arguments on the subject. The presentations were not only interesting but instructive, and showed the results of some diligent research on the part of the respective speakers.

Following the debate, different members spoke briefly on the advisability of the Society sponsoring legislation on the merit system.

Executive Board Holds Second Meeting

The executive board of the Indiana Society of Professional Engineers held their second meeting Friday, August 27th, in Indianapolis. In addition to the board, the national director and the chairmen of the standing committees were asked to attend.

The following engineers attended the meeting—Officers Cohen, Johnson and Smythe; National Director Carter; Directors Bower, Gootee, Meitz and Walker; and for the committees Hadley, Hardy, Brunsma and Watkins. The business of the meeting was confined chiefly to discussion of the proposed annual meeting and to some enforcement matters that had been presented to the board. Matters of general interest developed at the meeting are presented elsewhere in the news letter.

Annual Meeting of Society Planned

An annual meeting of the Indiana Society of Professional Engineers some time early in December was urged by Engr. Herbert Brunsma of the Chapter Activities committee at the last meeting. With the Society participating in the annual meeting of the Indiana Engineering Council in the latter part of the winter, the question arose as to whether an additional meeting would be advisable. Several members spoke in favor of Brunsma's proposal, maintaining that more time would be required for the business of our Society than would be allotted to the various member organizations at the annual meeting of the Indiana Engineering Council.

The subject was taken up further at the meeting of the executive board, and after considerable discussion it was voted to hold an annual meeting sometime previous to the annual February meeting of the Indiana Engineering Council. A committee consisting of the executive board, with Engr. M. G. Johnson as chairman, was appointed to work out the complete plans for the meeting.

The annual meeting will probably be a one day conclave, with business sessions in the morning and afternoon, a luncheon of the executive board at noon and with a banquet in the evening closing the program. An effort will be made to secure one of the national officers of the Society for guest speaker at the banquet.

Johnson Appointed on Registration Board

Announcement was made last week of the appointment of Engr. M. G. Johnson on the Indiana State Board of Registration for Professional Engineers and Land Surveyors to replace Engr. Paul E. Middleton, who recently resigned.

Engr. Johnson, Senior Assistant City Engineer of Indianapolis, is vice-president of the Indiana Society of Professional Engineers, and the Society congratulates him on the recognition he has received in appointment on the board.

Registration board members reappointed were C. C. Knipmeyer of Terre Haute, R. V. Achatz of Aurora, Louis A. Geupel of Evansville and John A. Kelley of La-Porte.

Rupard Added to Committee

Pres. Cohen, at the August meeting, announced the appointment of an additional member, Engr. Homer Rupard, to the Committee on "Ethics and Practices." Engr. Rupard, who is also secretary of the Indiana Engineering Council, will make a valuable addition to the committee, who have now in preparation a Code of Ethics for Engineers.

Carter to Attend Meeting of Directors

At the request of the executive board, National Director Earl L. Carter will represent the Indiana Society of Professional Engineers at the annual meeting of the Directors of the National Society in New York, October 8th and 9th.

Due to the important business of this meeting, which includes the nomination of the National Officers of the Society for the ensuing year, it was unanimously voted that the Indiana Society should be represented.

Prof. McCormick Reported Recuperating

Through a letter written by Engr. H. L. White, the Society has been informed of

the recent operation and hospital confinement of Prof. R. L. McCormick, who was retired this past June as Professor of Civil Engineering at Rose Polytechnic Institute. Prof. McCormick, who holds the first professional engineer's certificate of registration issued in Indiana, has a wide acquaintance among the professional engineers of the state and has shown an active interest in our Society.

At the August meeting the Society instructed the secretary to write to Prof. McCormick, extending wishes for a speedy recovery and thanking him for his interest in our Society.

From last reports, Prof. McCormick has been removed to his home and is rapidly returning to sound health.

Applicants for Membership

Chairman Dan E. Pierce of the Membership Committee has submitted the following applications for membership in the Society —Engineers Theophil Roesch, I. J. Krawcyzk, Charles T. Butler, Jack Moyse, D. B. Thomas, Denver L. Horner, C. E. Foster, Edgar Pound and Ernest L. Guyer.

For junior membership the following applications were submitted—Murvel L. Strome, W. E. Richter and N. B. Tyler.

Study Committee to Report Soon

The committee on Study of Highway Commission, of which Engr. K. B. Wolfskill is chairman, reports that they expect to submit their detailed report and recommendations at an early meeting of the Society.

Data has been received from the National Society of Professional Engineers and a number of the State Societies regarding the Highway Commission organization in other states. Several of the Highway Commissions and especially the Personnel Board of the State of California Civil Service Commission have cooperated in furnishing information.

Comparisons are being made of the salaries in the various states for positions corresponding to the same with the State Highway Commission of Indiana. Information is also being compiled on the working conditions, hours, form of Civil Service (if any), permanence of positions and effect of change in administration on those in technical or engineering positions.

With all of the data secured, a comprehensive report is anticipated with interest by the members of the Society, part... the State Highway engineers.

New Study Committee Appointed

Pres. Cohen has announced the appointment of a committee to study working conditions and salary scales among City Engineers, and to submit a report with recommendations for desirable legislation affecting this body of engineers.

Engr. Clyde R. Yater, City Engineer of Shelbyville, was named chairman of this committee with City Engineer Henry B. Steeg of Indianapolis and City Engineer O. B. Weaver of Goshen as members. At least two additional members will be appointed to serve on this committee.

Change of Address

In order to facilitate prompt receipt of the *News Letter* and of the meeting notices of the Society all members are urged to keep the secretary informed of their correct mail address.

MISSOURI

MISSOURI'S MEMBERSHIP APPLICATION REQUIREMENTS STANDARDIZED

Dear Editor:

I have just had an opportunity to look through the August issue of AMERICAN ENGINEER and I would like to call attention to a change that has been made in the structure of the Missouri Society. Evidently the article on Missouri was taken from a program mailed out prior to the meeting of July 10. At this meeting, it was brought out very clearly that the standards of the Society should be high and sub-professionals could not be included. The Constitution was changed accordingly and we hope that our present requirements put us in a position to be compared with other states and with the National Society. Without registration this is difficult, but we have provided the best possible requirements.

I am attaching a copy of our application blank which shows extracts from our Constitution and By Laws regarding requirements for Membership.

I am calling this to your attention in order that there will be no misunderstanding among our members and members of other Societies regarding the standards of our Society.

Yours very truly,

W. H. McDILL,
Secretary-Treasurer,
Missouri Society of Professional Engineers.

MISSOURI SOCIETY OF PROFESSIONAL ENGINEERS
(Incorporated)

Membership Application

I ..... Residing .....
Business Address .....
Being desirous of admission into the Society, submit the following history and statement of my professional experience:

Born: Date ..... Place .....

I was educated at (See Extracts from Constitution for Qualifications)	School or College	Dates
	.....	.....
	.....	.....
	.....	.....
	.....	.....

I was graduated in ..... (Date) and received degree of .....
and received degree of .....
Professional career, with positions held. State nature of work on which engaged.
.....
.....
.....
.....
.....
(Use Reverse Side if necessary for further information)
Member of Engineering Societies as follows:
.....
.....
.....
I will conform to all the requirements of membership, if elected.
Date ..... Signature .....
This applicant refers to the following members:
1 ..... 2 .....
3 ..... Received ..... 19....,
Presented to Board ..... 19...., Elected ..... 19....

Extracts From Constitution

Article III, Section 1—Membership of this Society shall consist of one class of Members.
Section 2—To become a Member of the Society, an applicant shall be a qualified professional engineer at least twenty-five years of age, and shall furnish proof of his compliance with the following qualifications:

Picture if Available.

a. Graduation from an approved course of at least four years in engineering from an engineering school or college; and a specific record of an additional four years or more of active practice in engineering work of a character satisfactory to the Executive Board, indicating that the applicant is competent to be placed in responsible charge of such work; or
b. A specific record of eight years or more of active practice in engineering work of a character satisfactory to the Executive Board and indicating that the applicant is competent to be placed in responsible charge of such work.

Section 3—Upon the adoption of adequate registration laws by the State of Missouri, an applicant must meet the requirements of said laws and such other requirements as may be deemed desirable by the Board of Directors of the Society.
Section 4—Satisfactory completion of each year of work in an engineering school or college of approved standing will be considered equal to one year of active practice.
Section 5—Only Members in Good Standing shall be entitled to vote and hold office.
Section 6—Application for Membership shal be on prescribed forms and accompanied by current dues, and all applications shall be subject to the action of the Executive Board.
Section 7—Upon payment of the current dues in the National Society of Professional Engineers, a Member of this Society may be certified to the National Society for Membership.

Extracts from By-Laws

Article I, Section 1—Dues for Members shall be Two Dollars ($2.00) per year, payable on and after July 1st.
Section 2—National Society dues shall be Four Dollars ($4.00) due and payable on or after January 1st.
Section 3—Members elected during the fiscal year shall pay proportionate dues for each quarter year or fraction thereof remaining in the fiscal year.

NEVADA

We welcome into the National Society of Professional Engineers the State of Nevada. Officers have not as yet been elected but following are some of the charter members and organizers:

Engineer Charles L. Hill, City Engineer, Reno, Nevada, Chairman of the Nevada Society Professional Engineers.

Engineer Henry P. O'Hagan, Engineer Examiner P. W. A., Reno, Nevada.

Engineer Arthur R. Thompson, Chief Engineer P. W. A., Secretary of State Board of Engineering Examiners, Reno, Nevada.

Engineer Wright L. Felt, Acting State Director, P. W. A., Reno, Nevada.

Engineer Frederick H. Sibley, Dean of Engineering, University of Nevada, and member of the advisory board of the State Board of Engineering Examiners.

Engineer Elbert A. Steward, Assistant City Engineer, Reno, Nevada.

Engineer Lehman A. Ferris, Chief Building Inspector, Reno, Nevada.

Engineer Elliott R. Cann, City Engineers' Office, Reno, Nevada.

Engineer Philip S. Cowgill, Sierra Pacific Power Co., Reno, Nevada.

Engineer Thomas A. Welsh, Asst. Engr. Sierra Pacific Power Co., Reno, Nevada.

NEW JERSEY

New Jersey Association of Professional Engineers and Land Surveyors, Inc.

STATE CONVENTION NEWS

Official Publication of 1938 Convention Committee

No. 2 Summer Edition Vol. 1

A Message from Engineer Jay A. Jacobs, President, Professional Engineers Club of Hudson County

The 18th Annual Convention of the New Jersey Association of Professional Engineers and Land Surveyors, Inc., will be held in Jersey City, N. J., Friday and Saturday, January 14 and 15, 1938, at which time the Professional Engineers Club of Hudson County, will act as hosts.

In the past, annual meetings of the Association have been held one day, with the dinner at night. The plans for the 1938 convention cover two full days and evenings. Five technical sessions will be a new departure, and, will afford the profession an opportunity to present and discuss timely engineering subjects.

Sight-seeing trips to points of interest are being arranged and I am sure will be fully enjoyed by every one.

Engineering and technical exhibits will be given a prominent part during the two day convention.

The Friday night informal smoker, the regular annual business sessions on Friday and Saturday, and the main social hour on Saturday evening, followed by the banquet should provide technical, business and social activities for all who attend.

There are well over 3000 licensed engineers in New Jersey, who owe it to their profession and State Association to make the Convention a complete success. We point out the necessity of enlisting the cooperation of the many engineers engaged in the many industrial concerns located throughout the State. The cooperation of the many engineers engaged in public, municipal, and, other lines of activities must also be enlisted. While the convention will be materially benefitted by the cooperation of such engineers and their associates, the Association of Professional Engineers throughout the convention will clearly demonstrate to these men what the Association is doing for them.

In holding the convention in Jersey City, may we point out that every convenience is available for hotel and transportation facilities. With the assurance of the engineers in our State to participate, we should have one of the greatest conventions in the history of the Association.

Minutes of Meeting of the Executive Board and Board of Trustees of the New Jersey Association of Professional Engineers and Land Surveyors, held at the Hotel Douglas, Newark, N. J., Monday, August 2, 1937.

Those present included Vice-President Victor Gelineau and Engrs. Wise, Kitchen, Sleeper, McKee, Trimpi, Jacobs, Tilton, Kreuger, Mueller, Johnson and Randolph.

Vice-President Gelnieau presided.

Engr. Mueller was advised by the Board to contact the N. J. Bell Telephone Co. and ascertain just what their opinion would be on adding the prefix "Engineer" in the white page listing of the telephone book.

The following resolution was adopted for President Beale Schmucker and State Board member Jacob L. Bauer, both of whom are at home ill.

President, Beale M. Schmucker,
State Board Member, Jacob L. Bauer.

"It is with deep regret that we learn of your illness and your inability to be present with us tonight, therefore be it,

RESOLVED, that this Board wish you speedy recovery so that we may have the benefit of your valued council in the near future and extend to you their sincerest best wishes."

Engr. Russell Wise reported as Chairman of the Legislative Committee:

None of the bills that were favored by this association succeeded in passing at the last session of the State Legislature. No action was taken on the Engineers Lein Law, Assembly No. 151. The Flood Control Authority Bill, Assembly No. 377, never came out and all protests against the diversion of highway funds for relief was passed over. Several of these bills will be presented at the next session and it is hoped that our efforts will be more successful.

The U. S. Army Engineers under Major General Markham are going ahead on the $200,000 Flood Control Survey of the Passaic River Valley. Vice-President Gelineau will contact Colonel Daly and Major Cunningham who will have charge of this work in reference to gaining employment for licensed engineers. Chapters, particularly Morris, Passaic, Bergen, Essex and Hudson are urged to have their men interested in being employed on this War Dept. Survey to keep in contact with their State Trustee who will be appraised of openings.

It was brought out that in a great many cases banks on F.H.A. loans are not requiring a certified survey of the property on such loans. The Board is of the opinion that for their own protection the banks should require up to date surveys. It was decided that each Trustee is to contact the banks in this area to determine if surveys are being made for F.H.A. mortgage loans and also ascertain who passes on the application.

Chairman Geo. Kreuger reported for the Special Committee appointed to ascertain how the Wagner Labor Relations Act affects the Professional Engineer and his committee made the following recommendations:

1. The present State Association represents only a small percentage of the licensed professional engineers, there being only 250 out of 3,000 licensees active members of the Association. Something definite should be done about membership because without an increased number of the licensees the association cannot hope to be a representative force for the profession.

2. That each Chapter contact in their area the organizations representing the other professions, law, medicine, accountants, dentists, etc. and discuss the present unionization problem as it affects the professional man.

3. That a letter be written up for the Association outlining the duties of the engineer so far as unionization is concerned and explain what his obligations are.

This report was unanimously accepted and Vice-President Gelineau appointed Engr. Kreuger to write the letter mentioned in article 3 of the report for presentation for consideration at the next meeting.

It was pointed out during the discussion that many organizations have taken definite steps against union organization.

The Civil Service Association are definitely against union affiliation.

The Western Society of Professional Engineers have stated that they will act for all professional engineers in their area and represent them as collective bargaining agent in any controversy.

Engr. Tilton asked, "How does the C.I.O. affect the Professional Engineer?"

Engr. Kreuger—Three years ago in Hudson County when times were bad and there were many engineers out of work the A. F. of L. inaugurated an Engineers Union. The County Chapter realizing the situation and the condition it might create refused to aid or help any one affiliated with the Engineers Union in getting a job and for this reason the union failed.

In New York City there is an A. F. of L. Engineers Union which has only recently started a drive and is successfully unionizing the drafting rooms of the steel companies and also Structural Engineers.

In the Philadelphia area the C.I.O. is successfully organizing engineers now employed by the W.P.A.

At the World's Fair in New York City the Engineers are organized in a C.I.O. Technicians Union and this union succeeded in obtaining for the men a 20 per cent increase in wage.

Engr. Gelineau—There is no doubt that many Engineers employed by big corporations are underpaid, have small chance for advancement and see in unionism an opportunity for wage improvement. It is this group that we have to reach and offer something concrete to.

This Committee was instructed to remain active and continue to follow and study the union situation as it affects engineers and report regularly to the Board the result of their observations.

Engr. Randolph stated that the National Society is studying the C.I.O. problem, have already met with other professional groups, union leaders and others and they should soon offer some suggestions, are steps to be taken by the National Society or the State organizations. At present it seems advisable to withhold any action until a report is re-

ceived from the National Society, but in the meanwhile it is deemed advisable for each Chapter group to study the C.I.O. situation as it affects their local group and also for them to contact the other professional groups in their area.

Suggestions and reports from the various Chapters on C.I.O. or any engineer unionism will be welcome at the next Board meeting.

President Mueller of the Essex County Chapter brought out a very interesting activity of their Chapter. Each High School in their area has been contacted and the services offered of an Engineer to speak to the seniors or at assembly sometime during the school year and in most every case the offer has been accepted. This is high class publicity and educational advertising.

ERNEST F. WEEKS,
Secretary-Treasurer.

NEW YORK

NEW YORK COUNTY CHAPTER
of the N. Y. State Society Inc., of
PROFESSIONAL ENGINEERS

The Chapter meeting which was scheduled for October 5 has been cancelled on account of the National Convention which will be held in New York City, October 8 and 9. Members of this Chapter who have been appointed to serve on the Committe on Arrangements are Engineers Balcom, McKee, Steinman, Towse and Walsh. A reception committee to receive and escort speakers and guests has been appointed consisting of Dr. Steinman, Dr. McKee and Engr. Balcom.

Arrangements for the membership campaign have been completed. Following Vice-President Johnson's letter to recent licensees, a letter will be sent to them by the Chapter and they will also receive invitations to attend the National Convention and the first Chapter meeting following the Convention. Engineers Garsson, Waugh, Davidson, Jansen and Walsh have been appointed zone leaders to assist Engr. Maurice Deutsch who is Chairman of the Membership Committee. The campaign was expected to be well under way bv the end of September.

OREGON

A Joint Meeting of the Professional Engineers of Oregon and the American Society of Civil Engineers was held in the auditorium of Public Service Building, Portland, Oregon, Thursday, September 23d.

Glenn H. Smith, Engineer of Outside Construction, Department of City Lighting, Seattle, gave an illustrated lecture on "Ruby Dam and Skagit River project."

A cordial invitation to attend was extended to American Institute of Architects; American Institute of Electrical Engineers; American Institute of Mining and Metallurgical Engineers; American Society of Mechanical Engineers; Portland Electric Light Association; Society of American Military Engineers.

The Oregon Society was formed in 1929 under the leadership of J. C. Stevens, consulting engineer of the firm Stevens and Koon, and is really an outgrowth of the former Oregon Association of Engineers. It seeks to serve the profession by supporting the Compulsory Engineering Registration Law and by providing interesting meetings which will promote good fellowship among engineers of all classifications. We also assist, whenever possible, to secure proper engineering talent for persons who make inquiry, at this office. Five years ago a relief fund, amounting to $3,500, was raised by subscription among our members and has since been used in assisting engineers needing help. We are sponsoring a weekly program luncheon every Tuesday noon from September until June. In our opinion the activities just named indicate that the "Professional Engineers of Oregon" has a real place to fill in serving the engineers of the state in all manner of public relation details that do not particularly concern any of the founder societies.

H. A. RANDS, *President.*
ROBERT E. DUNIWAY, *Secretary.*

PENNSYLVANIA

ALLONS
PENNSYLVANIA SOCIETY OF
PROFESSIONAL ENGINEERS
PITTSBURGH CHAPTER

Chapter Publications Committee-Editors
610 Maloney Bldg. 309 Fourth Ave.
Vol. 1 September 1937 No. 6

The regular meeting of the Pittsburgh Chapter, was held Sept. 17th, with dinner at Webster Hall Coffee Shop, followed by a meeting in Auditorium Mellon Institute.

THE GUEST SPEAKER was:—Dr. Rudolf K. Bernhard, Consulting Engineer, Philadelphia, Pa.

HIS SUBJECT:—"Artificial Vibration—A New Method of Dynamic Research," illustrated by films.

EDITORIAL

We are just back from the State Convention of the Penna. Society of Engineers at Hershey.

We want to congratulate Engineer Geiger and his assisting committee for a job well done. The Harrisburg Chapter comes in for our congratulation in taking the responsibility for putting over the State Convention. The results were an honor to the Chapter and all concerned.

We enjoyed every minute of it; who would not with speakers like Engr. Arthur V. Sheridan, President N. S. P. E.; Engr. Alfred E. Roche, President, The New York State Society of Professional Engineers and Edmund R. Purves, President, Penna. Assn. of Architects; to say nothing of Engr. Harry E. Harris, National Director N. S. P. E. from Connecticut; Engr. Ernest F. Fox, Secretary, New York State Society and S. Edw. Hannestad, Penna. Legislative Reference Bureau.

In Pittsburgh, from time to time, there have been expressed opinions in sympathy with the resolution offered by the Harrisburg Chapter at the State Convention in connection with the position of Engineers who are exempted by law from registration.

It is hoped that the committee to whom this resolution is referred, will particularly investigate Paragraph 2, Sec. 1 and all of Sec. 10, Act 415 (Registration Act for Professional Engineers) with the view of either permitting engineers of these classes to become members without reserve, or if there seems to be looseness in the Act, let us correct the Act. In any event it is wondered if the defining by law of Professional Status should not be the only Qualification for membership in the Society.

In this connection it might be profitable to inquire of the Medical and Legal Professions concerning the method used by these societies in parallel cases of employees of the Federal Government, both in its civil and military branches.

In any event, it is the opinion of this staff that our Society, Local, State and National, should promote the opinion that no Engineer will allow his professional Status to rest on exemption, but will register and so place his professional status on a firm foundation. No man is bigger than his profession. If he wishes to be big, make the profession big.

The National Society reports progress in their program for united action by professional men in connection with the Wagner Labor Relations Act.

It is understood that in this connection the large recognized Professional Societies have refused to discuss these matters with organizations whose Professional Status is not so constituted by Legislative Act.

To an observer it seems those who have long enjoyed recognized Professional Status, know what fundamentally constitutes Professional Status, namely, Legislative Act.

Many Engineers might cogitate that. Facts talk.

IT COMES UP HERE

We are introducing to the Chapter membership, the following Engineers:—Charles Stanley Israel, 5635 Hobart St., Pittsburgh; Fred Denig, 714 Koppers Bldg., Pittsburgh; John R. Shoffner, Timblin, Pa.; Frank M. Roessing, 417 City County Bldg., Pittsburgh.

Transfers:—Engineer Arthur Garfield Leake of Middletown, Virginia to the Harrisburg Chapter.

Chapter Membership 131.

Transferred 1.

The schedule of engineering fees and rates of pay for the Pennsylvania Society of Professional Engineers which was recently sent to the members for letter ballot by the Committee headed by Engr. Lawrence Costello, Chairman, was almost unanimously approved by the letter ballot and the approval of the Convention at Hershey was unanimous.

Is not the next move the advertisement of this schedule in the local press? Also, is it not the proper thing for each member to notify his clients of the new schedule? Let's stand squarely behind this schedule.

LOST—In Hershey, one Light Switch to five bulbs in ceiling, Hershey Golf Club Dormitory. Finder, please return to Engineer Alfred E. Roche, Troy, N. Y.

The following members of the Pittsburgh Chapter attended the State Convention at Hershey on Aug. 21:—Engr. and Mrs. Hutchinson; Engr. and Mrs. Aires; Engr. and Mrs. Cartin; Engr. and Mrs. J. Earl Frazier; Engr. Duff and Engr. Canfield.

Engineer Ambrose R. West, member of the Reading Chapter, has been employed by Walter Rae, Contractor. Engr. West resides at 101 Central Square, Mt. Lebanon.

Engr. Atwater is just getting around again after an attack of influenza. We hope he will soon regain his strength.

The following Engineers nave been asked to act as correspondents for "Allons" in Western Pennsylvania:—Norman A. Abel, Oakmont, Pa.; Arnold Leigh Benton, Bradford, Pa.; J. Earl Frazier, Washington, Pa.; Harry B. Joyce, Erie, Pa.: Sinclair T. Powell, Pittsburgh; Ray Stevens Quick, Pittsburgh; George F. Siefers, Pittsburgh.

The Chapter Publications Committee includes the following Engineer members:—F. G. Ross, Chairman; Roswell Canfield, V. Chairman; with S. H. Burns; Col. Charles Stratton Davis; Dean E. A. Holbrook; C. K. Harvey; George M. Levinson and Karl A. Miller.

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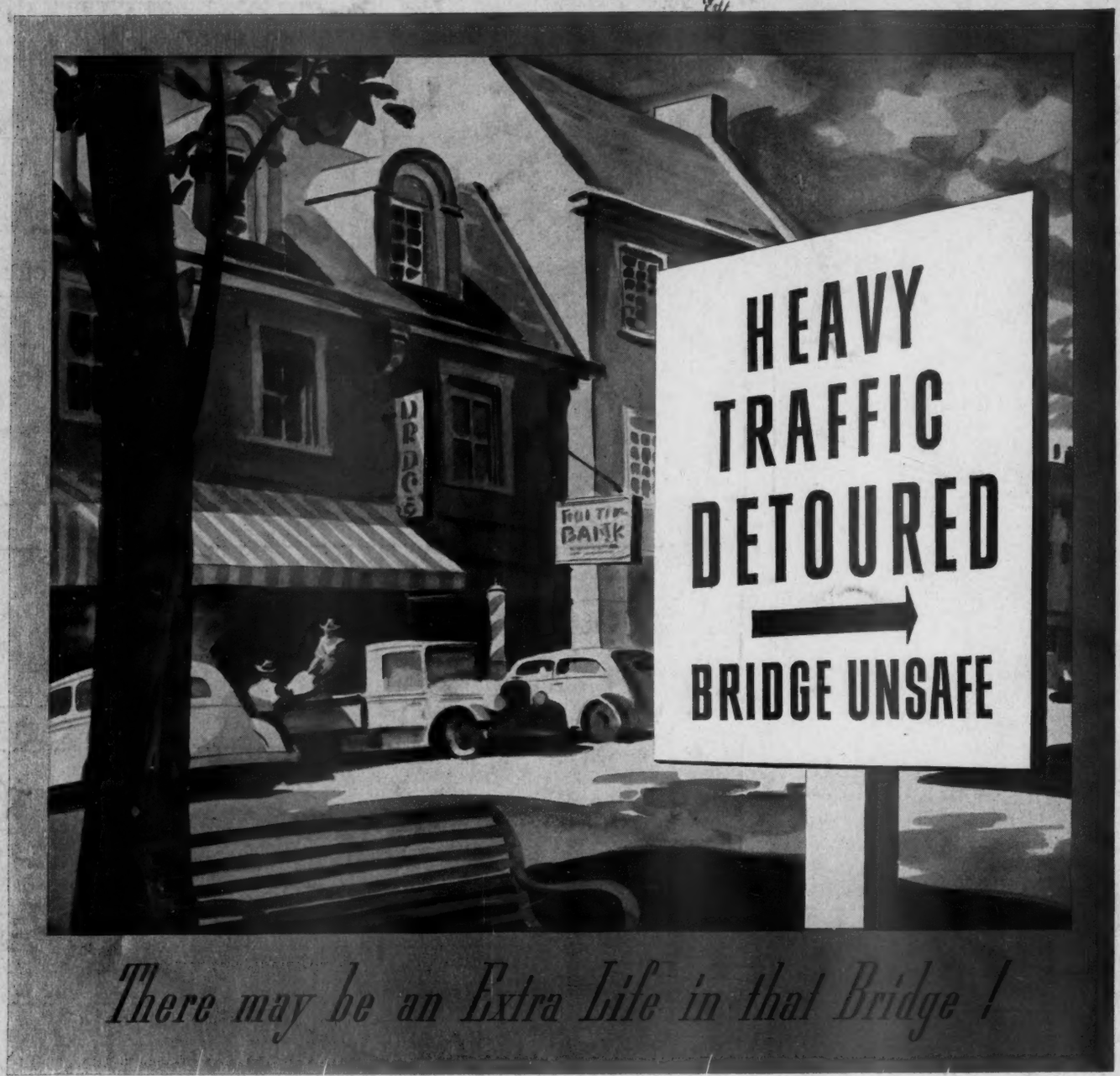

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